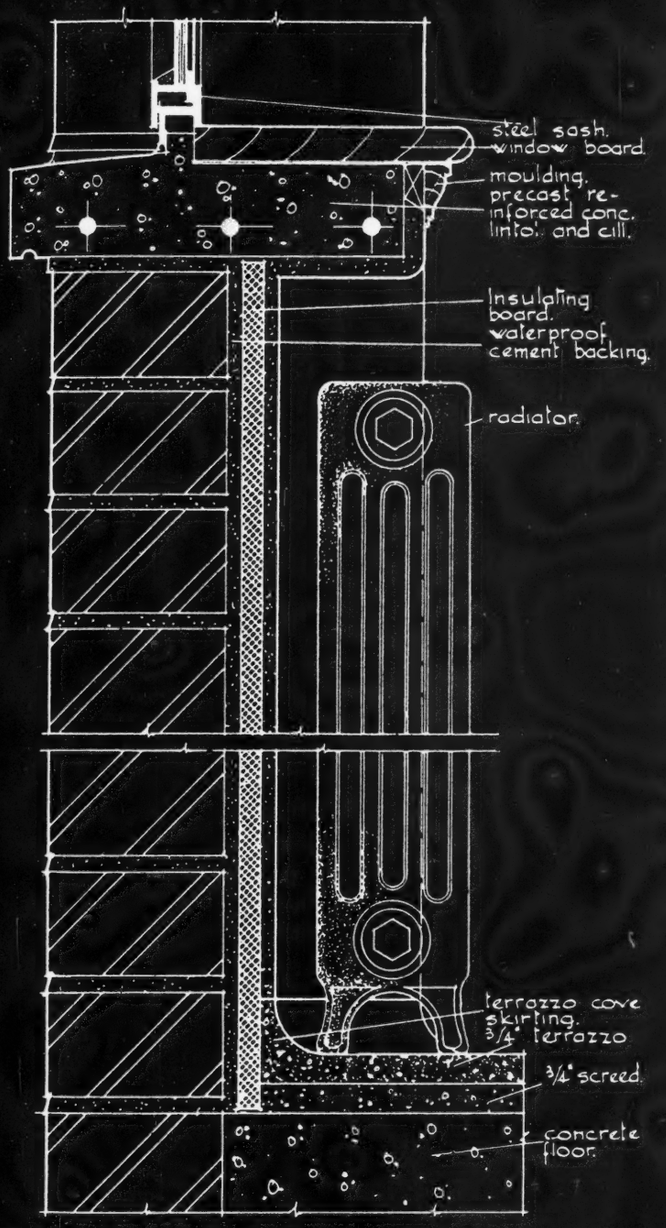
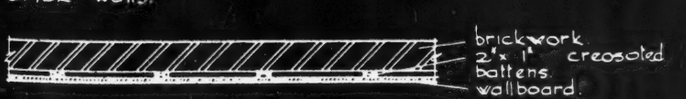
INSULATION BOARD WALLBOARD and BUILDING BOARD: HEAT and SOUND INSULATION:

WALLS:



SECTION THROUGH RECESS IN 9" WALL SHOWING THE HEAT INSULATION OF A RADIATOR.

Brick walls.

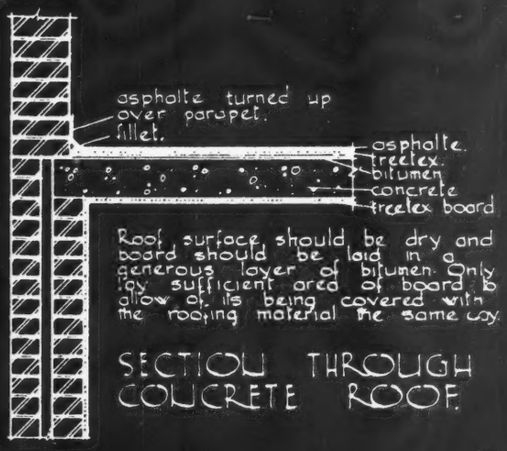


Stud partitions.

NOTE:
Wallboard may be fixed direct to brick, concrete or breeze walls, by means of a cement slurry or plaster adhesive.

ROOFS:

Flat:



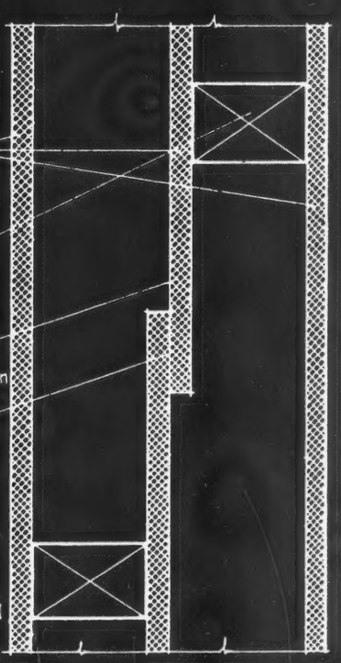
Roof surface should be dry and board should be laid in a generous layer of bitumen. Only lay sufficient area of board to allow of its being covered with the roofing material the same day.

SECTION THROUGH CONCRETE ROOF.

Pitched:

NOTE:
The stucco is best applied when the rendering is still in the green state, and should consist of three parts of aggregate to one part cement.

SECTION THROUGH EAVES.



PLAN OF VERY EFFICIENT SOUND INSULATING PARTITION.

Information from Messrs Treetex Ltd.

WALLIS GILBERT AND PARTNERS, CHARTERED ARCHITECTS, 15 ELIZABETH ST. LONDON. S.W.1. J.K.G.

Schedule of Blue Print Working Drawings.

General data on sizes, weights, packing and nailing, including composite Insulating Board.

Modern treatment of joints, etc.

Sound Insulation of floors and ceilings (Constructional details).

Sound and Thermal Insulation of roofs, walls and partitions.

Suggestions for modern decorative treatment, eliminating jointing.

Application of Hard Board in modern construction (Building).

Application of Hard Board in modern construction (General utility).

Refrigerator Insulation and the prevention of Condensation.

Recommendations regarding acoustical construction of Cinemas and Public Halls.

Application of Insulating Board to modern agricultural and industrial structures (a).

Application of Insulating Board to modern agricultural and industrial structures (b).

Insulating Board as a foundation for surfacing materials and decorative finishes.

Selected copies of the above mentioned working drawings will appear periodically in this Journal, but all registered members of the architectural and allied professions desiring individual copies of same or the complete series giving all possible data in connection with Insulating Board are invited to make written application to TREETEX Ltd., Shell-Mex House, Strand, London, W.C.2.

As the number of Blue Print drawings available is strictly limited, early application is desirable from those wishing copies to be reserved.

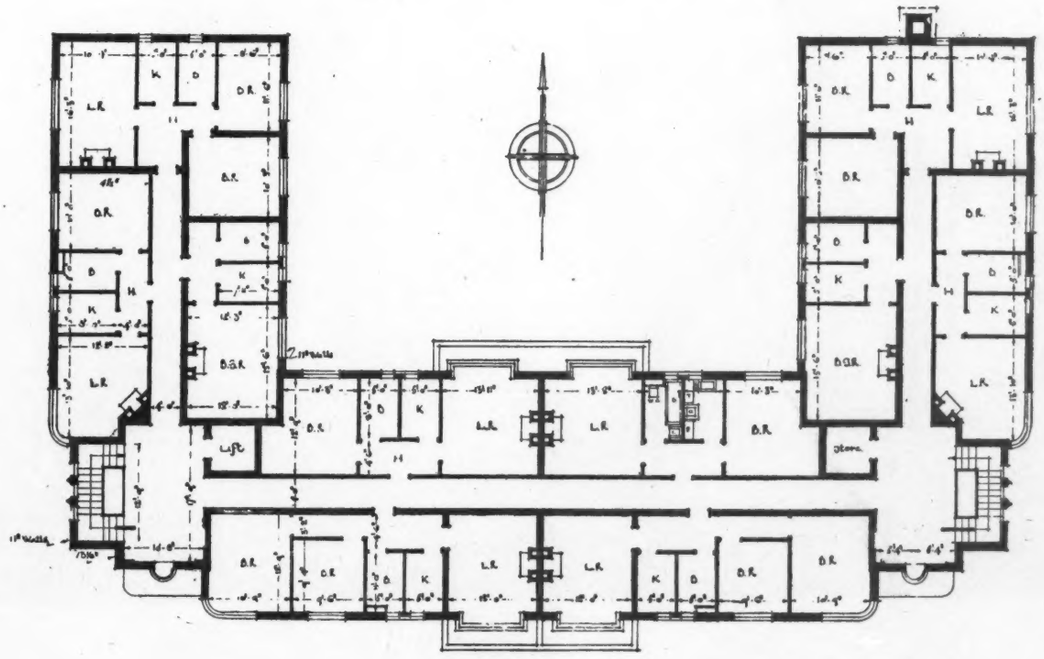
In order to prevent these sheets being lost and to facilitate easy reference, Messrs. Treetex Ltd. will supply on request, without charge, a suitable file for the retention of the same.

BEDFORD MANSION FLATS, DERNGATE, NORTHAMPTON: Detail of Entrance, etc.

SIR JOHN BROWN AND MR. A. E. HENSON, F. AND L.R.I.B.A., Architects.

(See page 594.)

GENERAL VIEW.



TYPICAL FLOOR PLAN.

BEDFORD MANSION FLATS, DERNGATE, NORTHAMPTON.

SIR JOHN BROWN AND MR. A. E. HENSON, F. AND L.R.I.B.A., Architects.

(See page 594.)

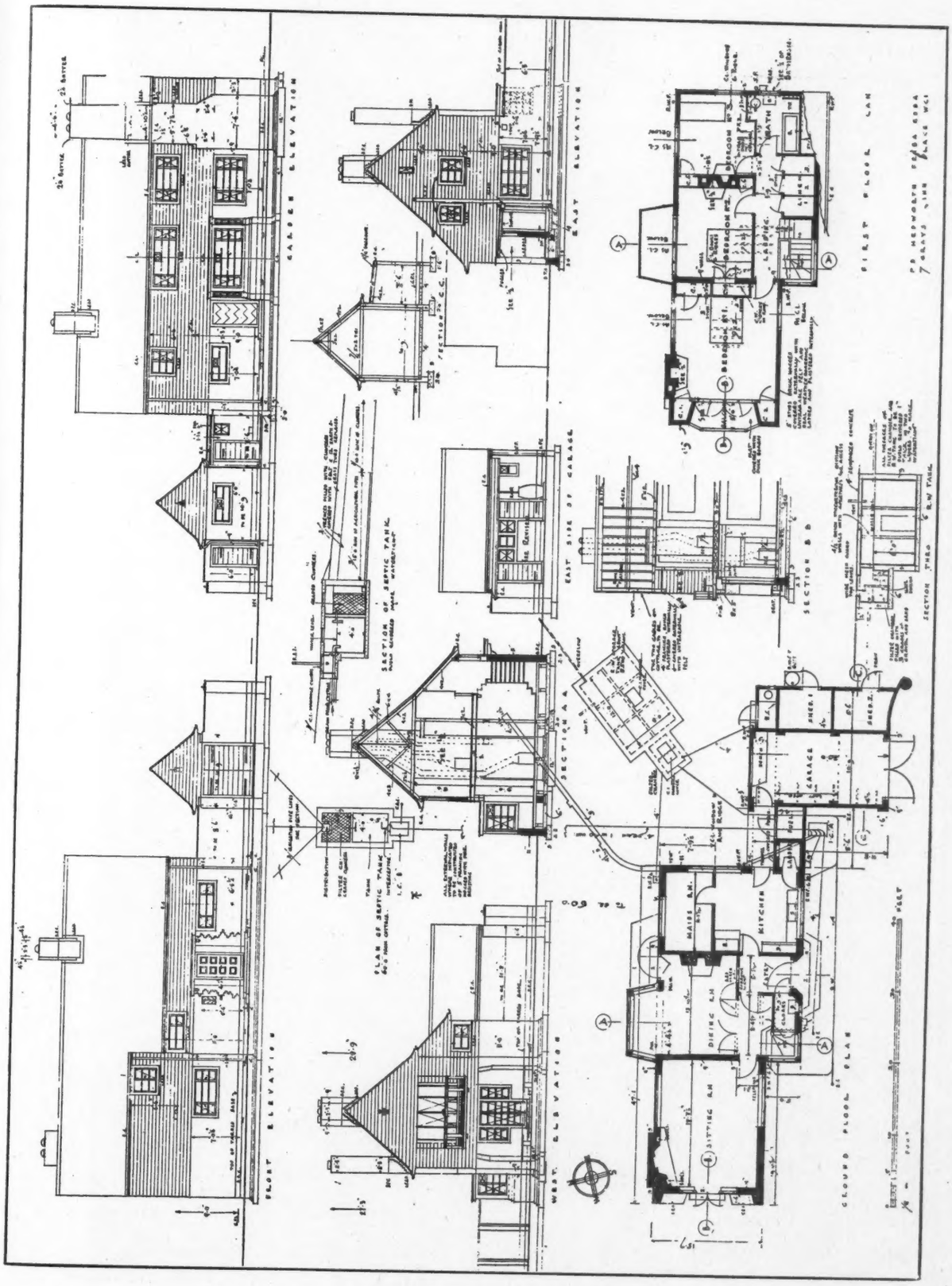
VIEW FROM NORTH-WEST

VIEW FROM NORTH-EAST.

A HOUSE AT TURVILLE HEATH, BUCKS.

MR. P. D. HEPWORTH, F.R.I.B.A., Architect.

(See page 594.)



A HOUSE AT TURVILLE HEATH, BUCKS.

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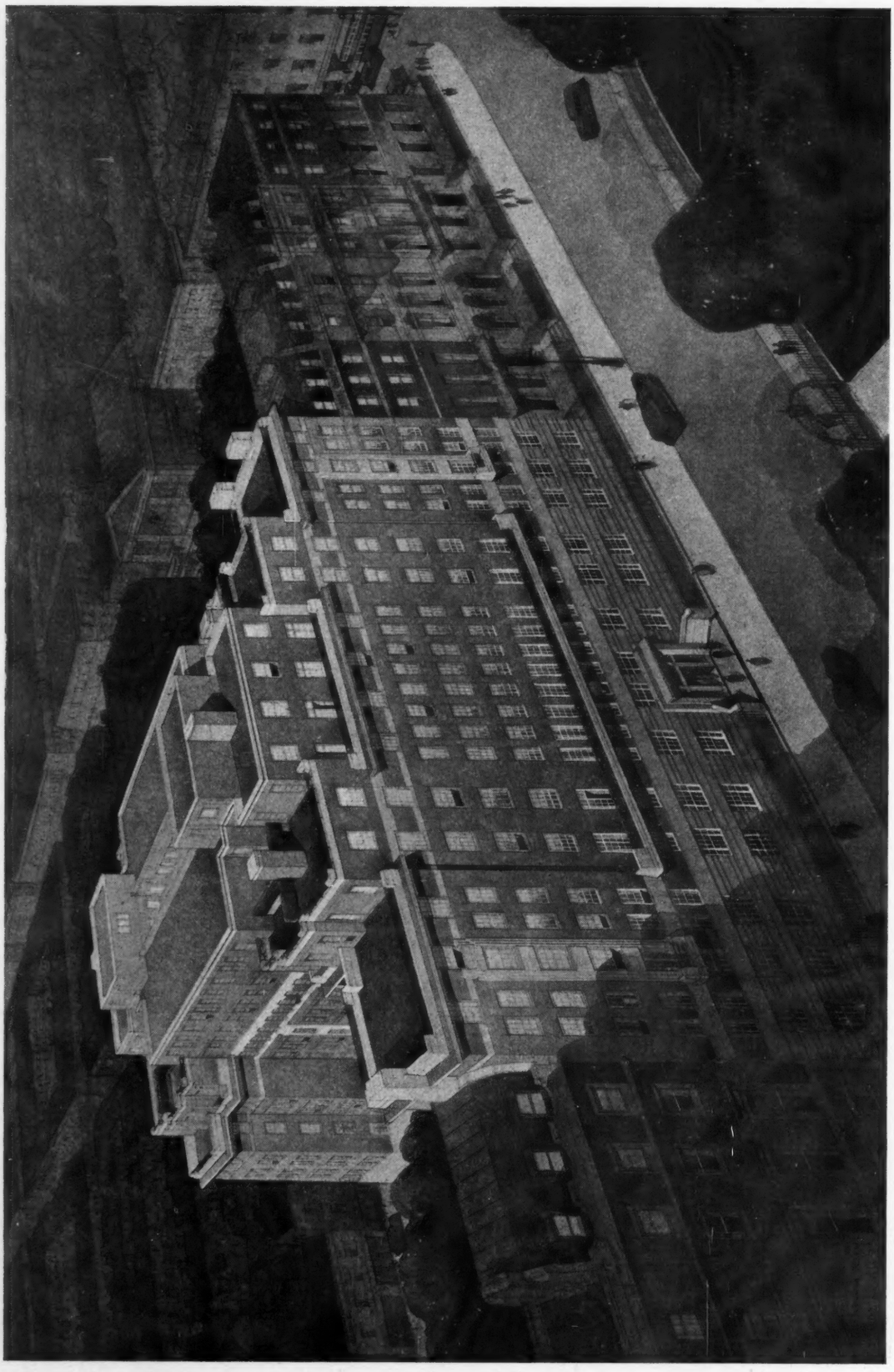
(See page 594.)

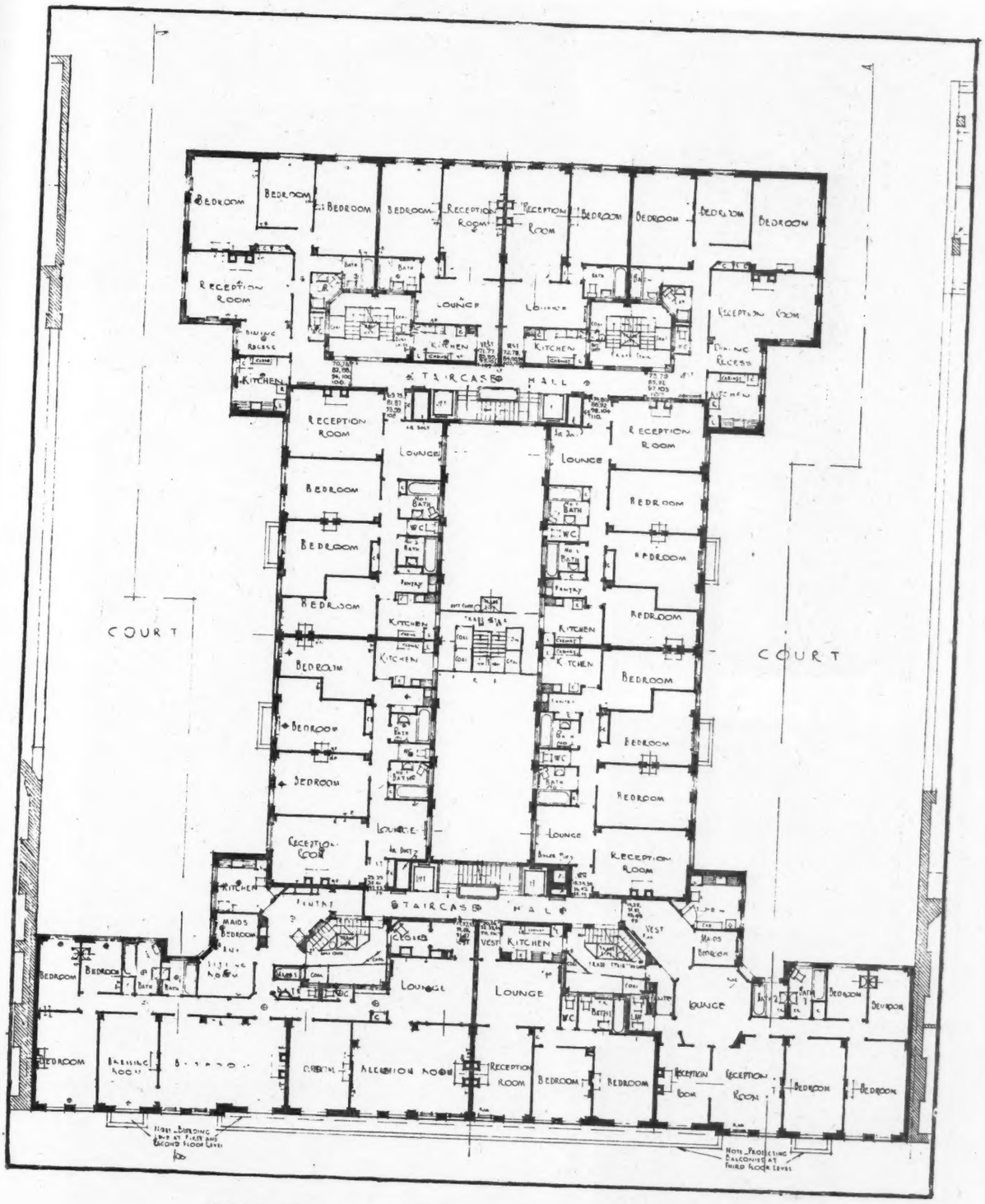


NEW FLATS, No. 15, PORTMAN SQUARE, W.

MR. W. E. MASTERS, F.R.I.B.A., Architect.

(See page 594.)

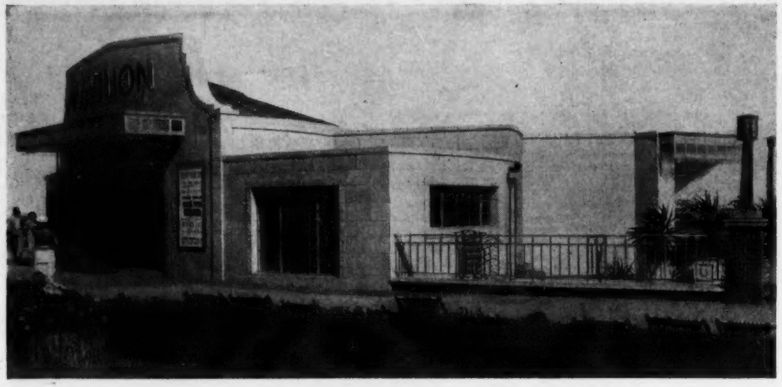
R.A. EXHIBITION, 1936.



NEW FLATS, No. 15, PORTMAN SQUARE, W.: Typical Floor Plan.

MR. W. E. MASTERS, F.R.I.B.A., Architect.

(See page 594.)



ENTRANCE, UPPER PROMENADE.

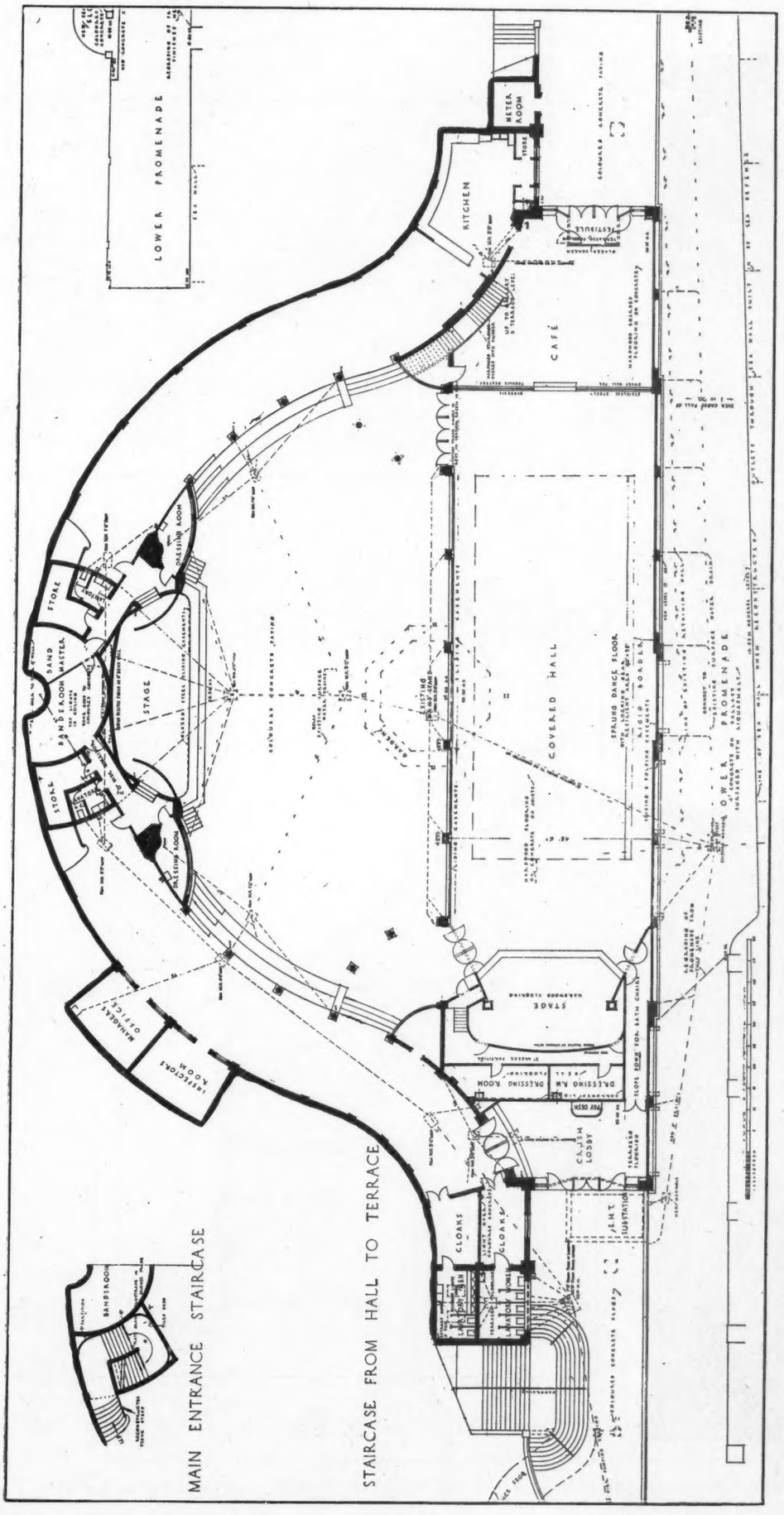
VIEW FROM LOWER PROMENADE.

AUDITORIUM.

RECONSTRUCTION OF BAND PAVILION, CLACTON-ON-SEA.

MR. W. AISTON, M.INST.M. AND CY.E., Engineer and Surveyor to the U.D.C.

(See page 594.)

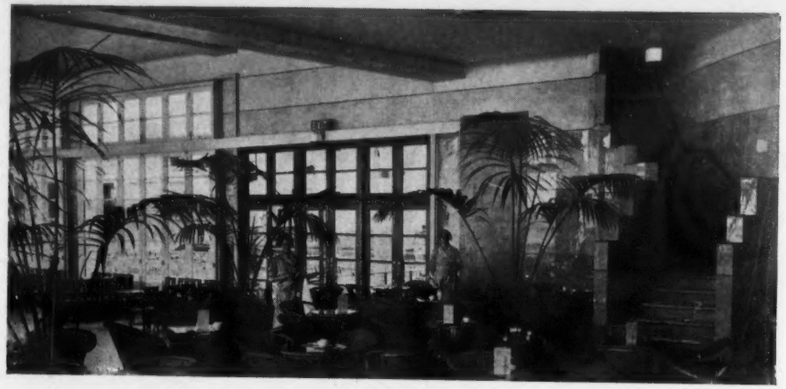


PLAN AT PAVILION LEVEL.

RECONSTRUCTION OF BAND PAVILION, CLACTON-ON-SEA.

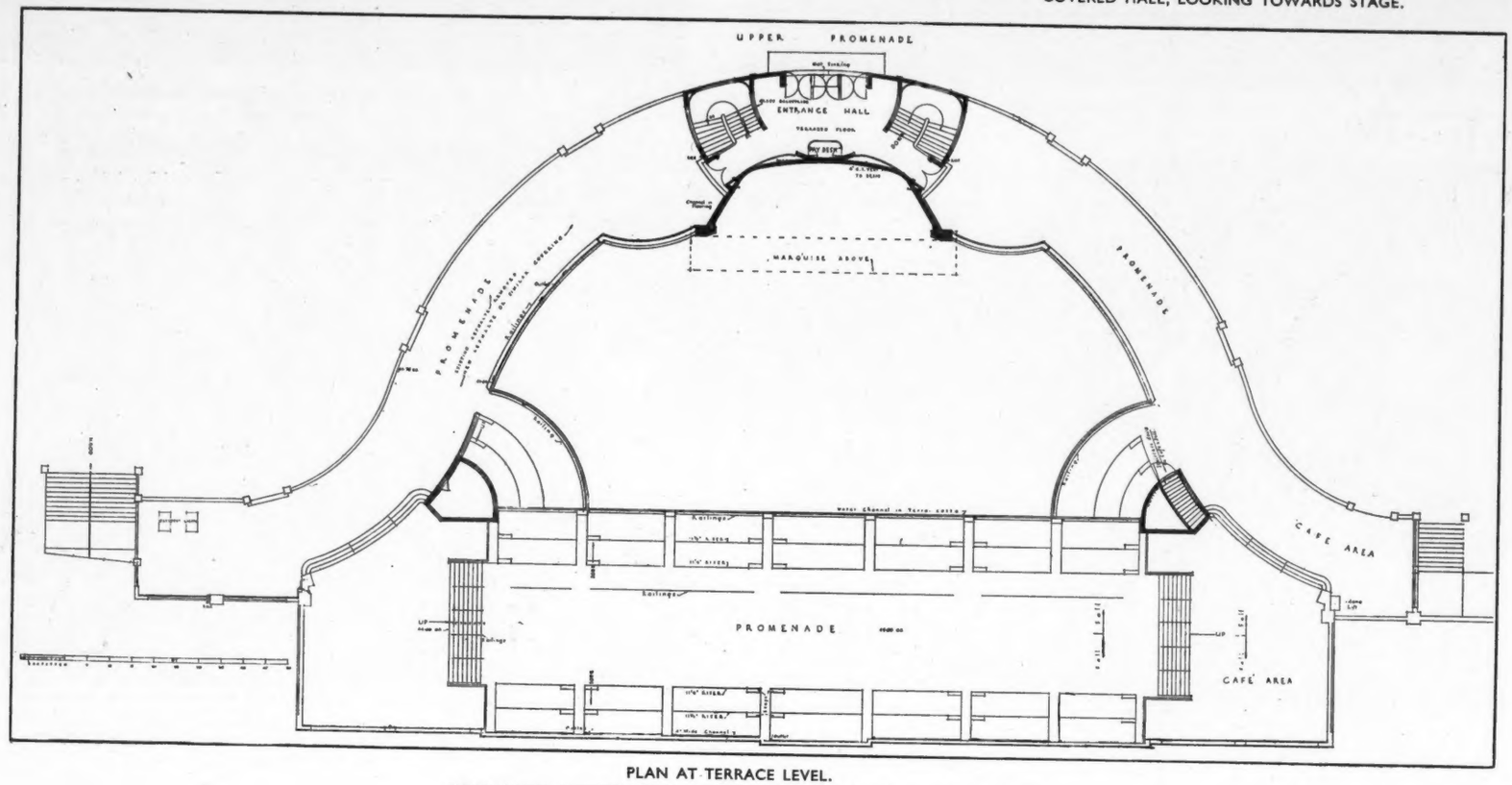
MR. W. AISTON, M.INST.M. AND CY.E., Engineer and Surveyor to the U.D.C.

(See page 594.)



CAFE.

COVERED HALL, LOOKING TOWARDS STAGE.

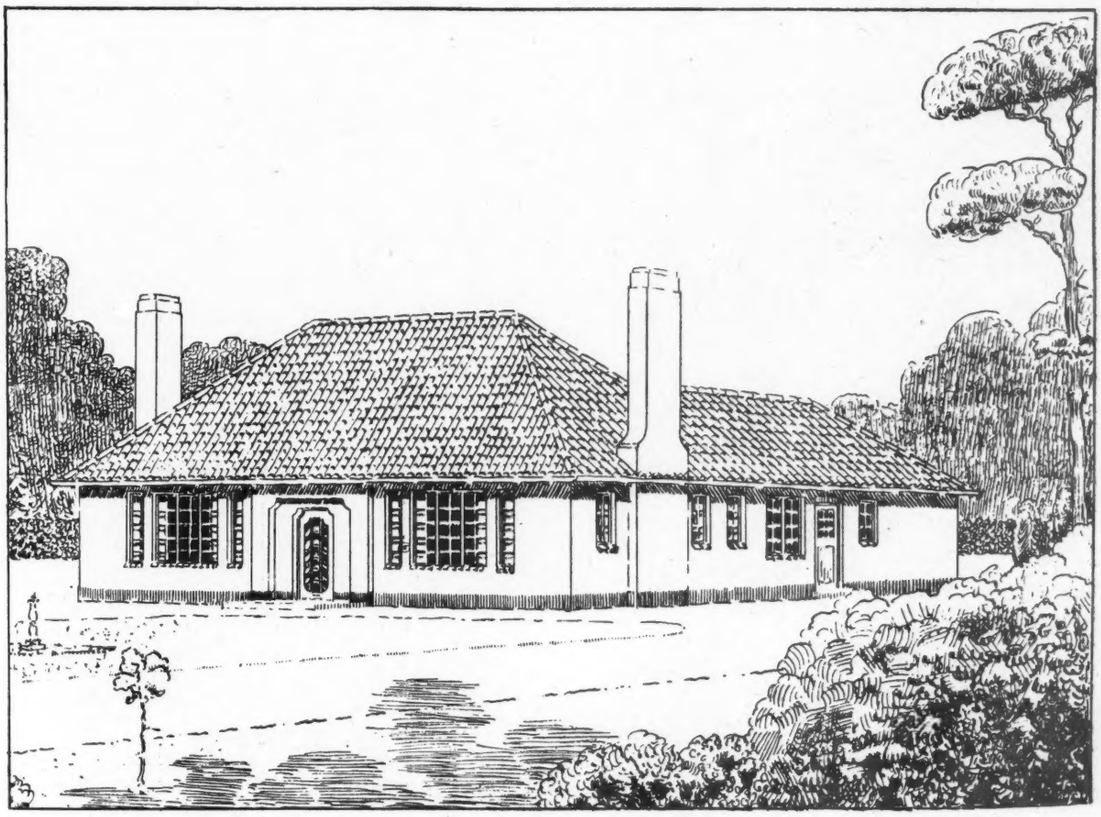


PLAN AT TERRACE LEVEL.

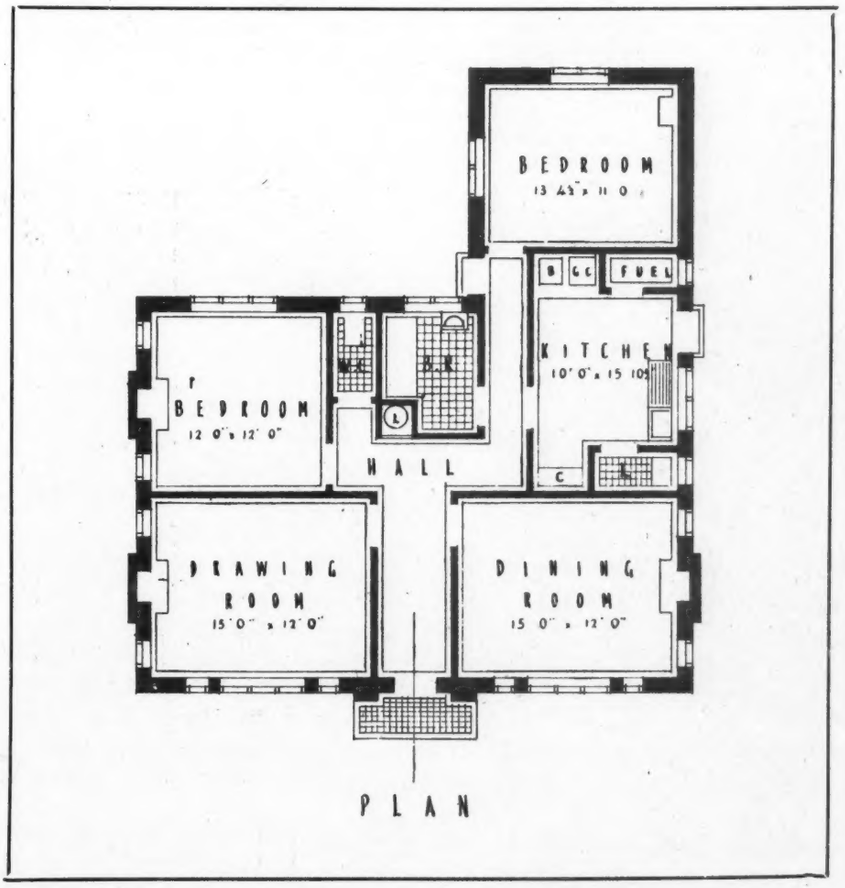
RECONSTRUCTION OF BAND PAVILION, CLACTON-ON-SEA.

MR. W. AISTON, M.INST.M. AND CY.E., Engineer and Surveyor to the U.D.C

(See page 594.)



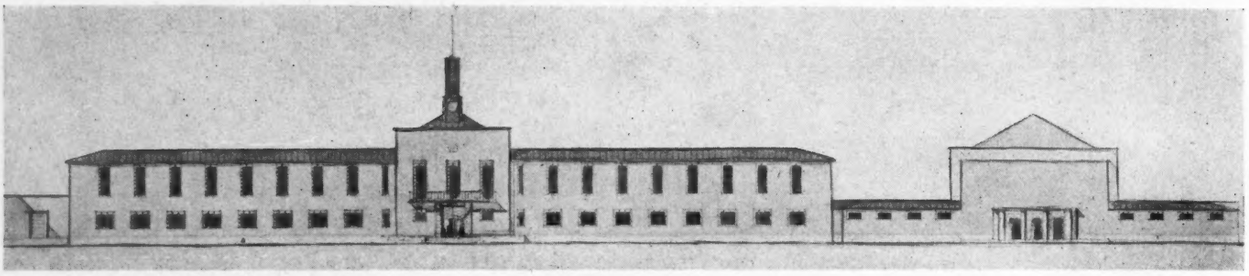
PERSPECTIVE VIEW.



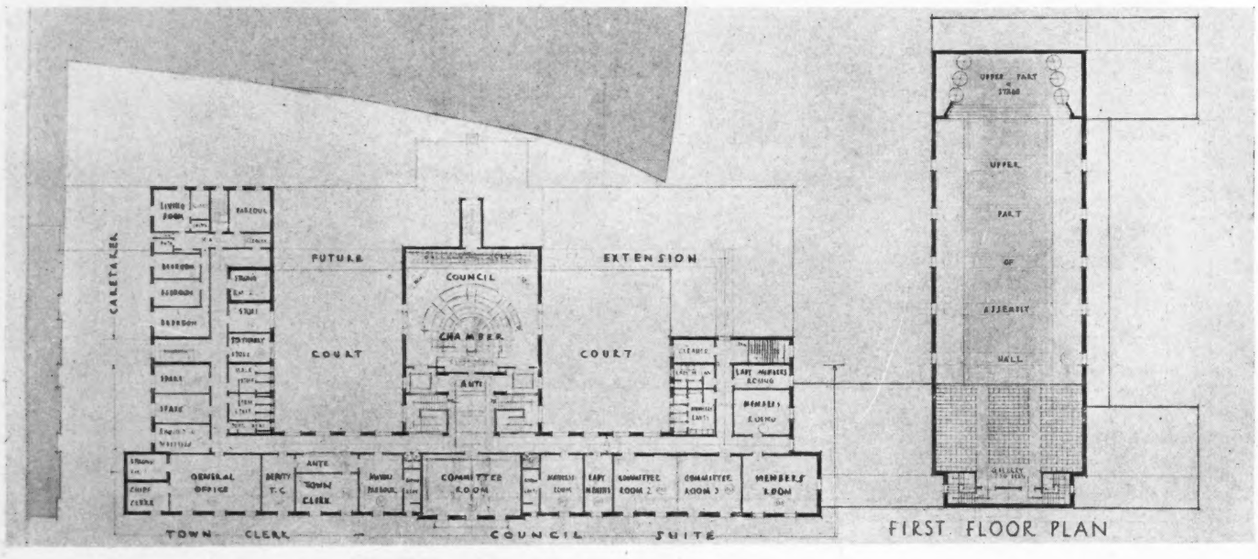
A BUNGALOW ON THE CARBERY ESTATE, SOUTHBOURNE, BOURNEMOUTH.

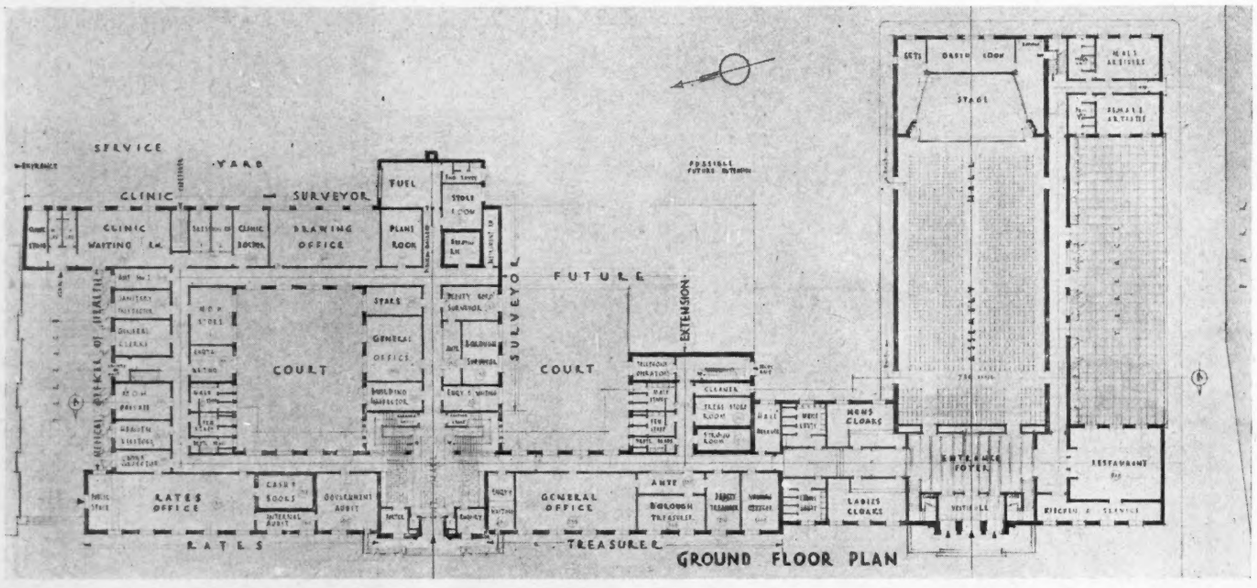
MESSRS. E. W. PEARSON, F.R.I.B.A., AND PARTNERS, Architects.

(See page 594.)



FRONT ELEVATION.

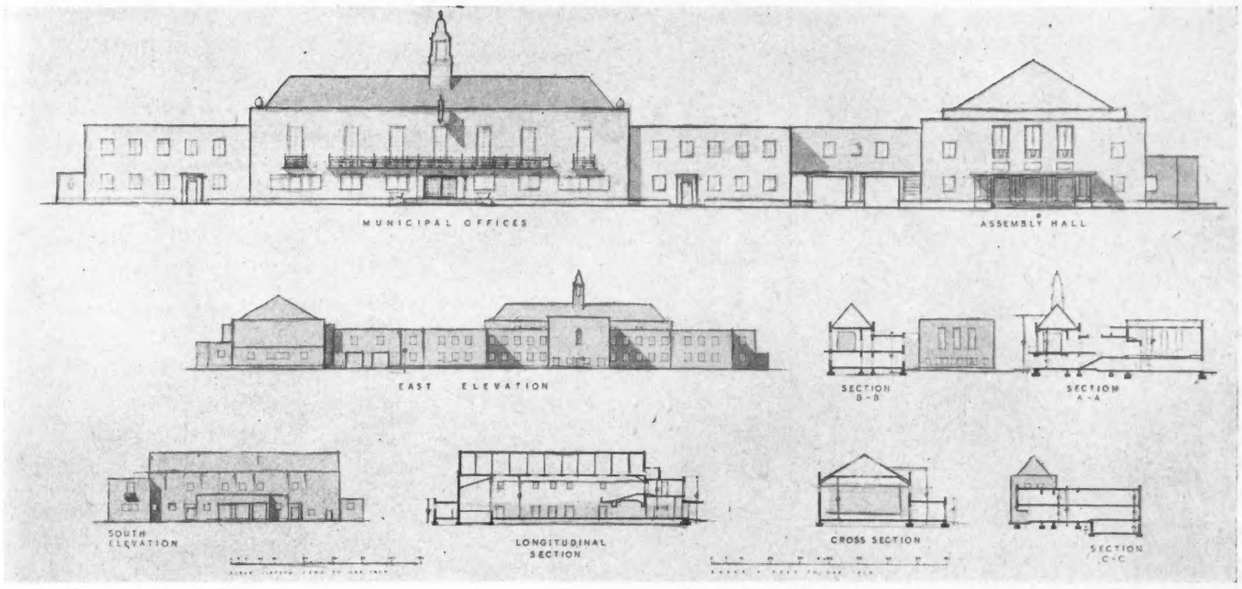


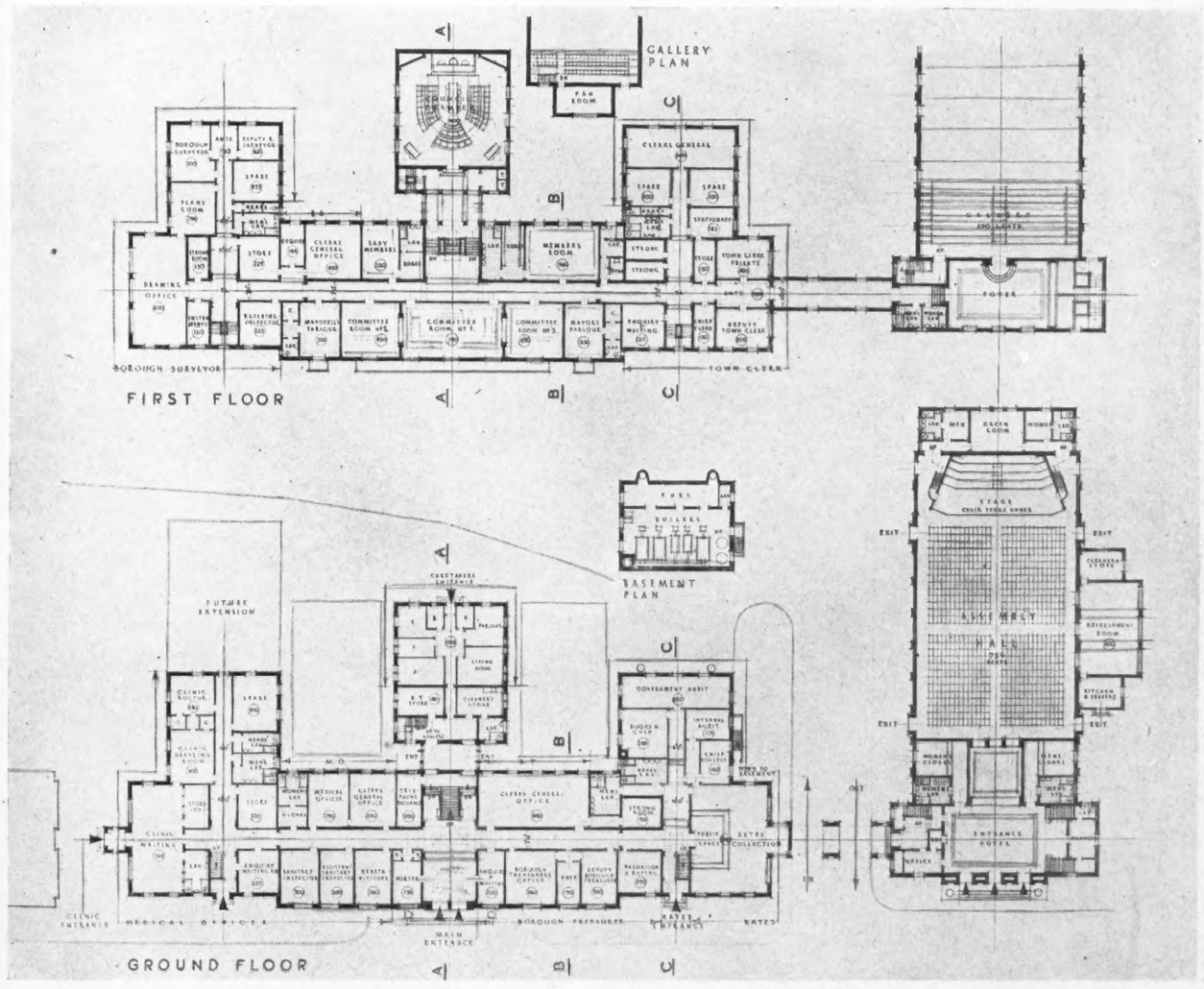


DARTFORD MUNICIPAL BUILDINGS AND TOWN HALL COMPETITION: Design placed Second.

BY MR. CHARLES H. PIKE, A.R.I.B.A.

(See page 594.)

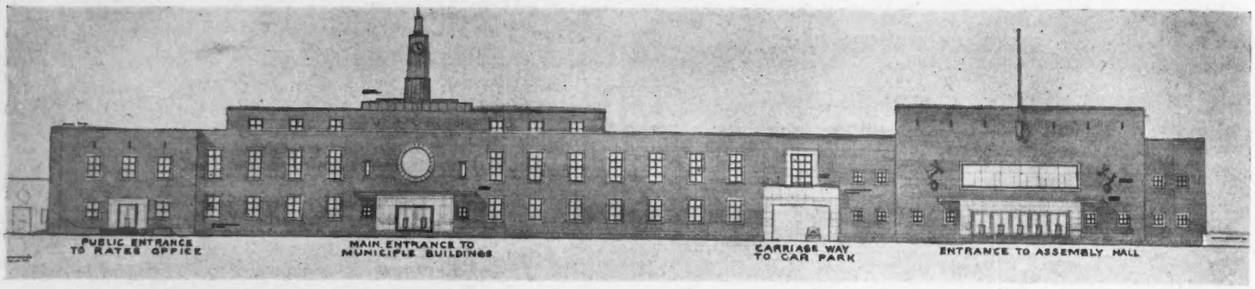


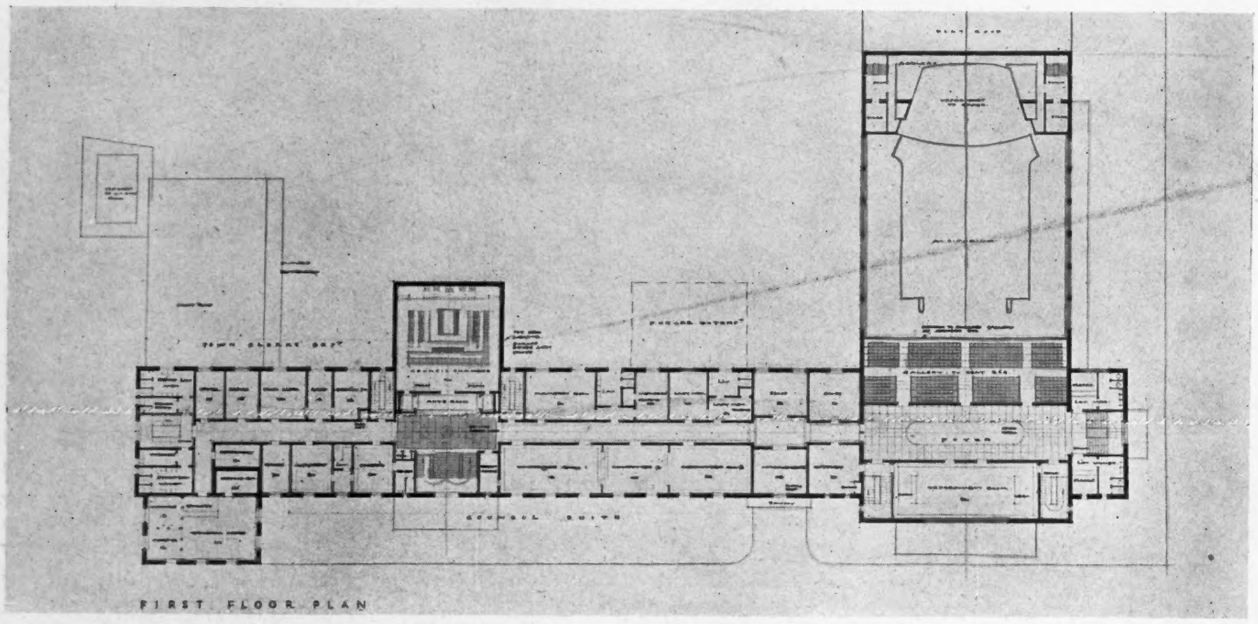


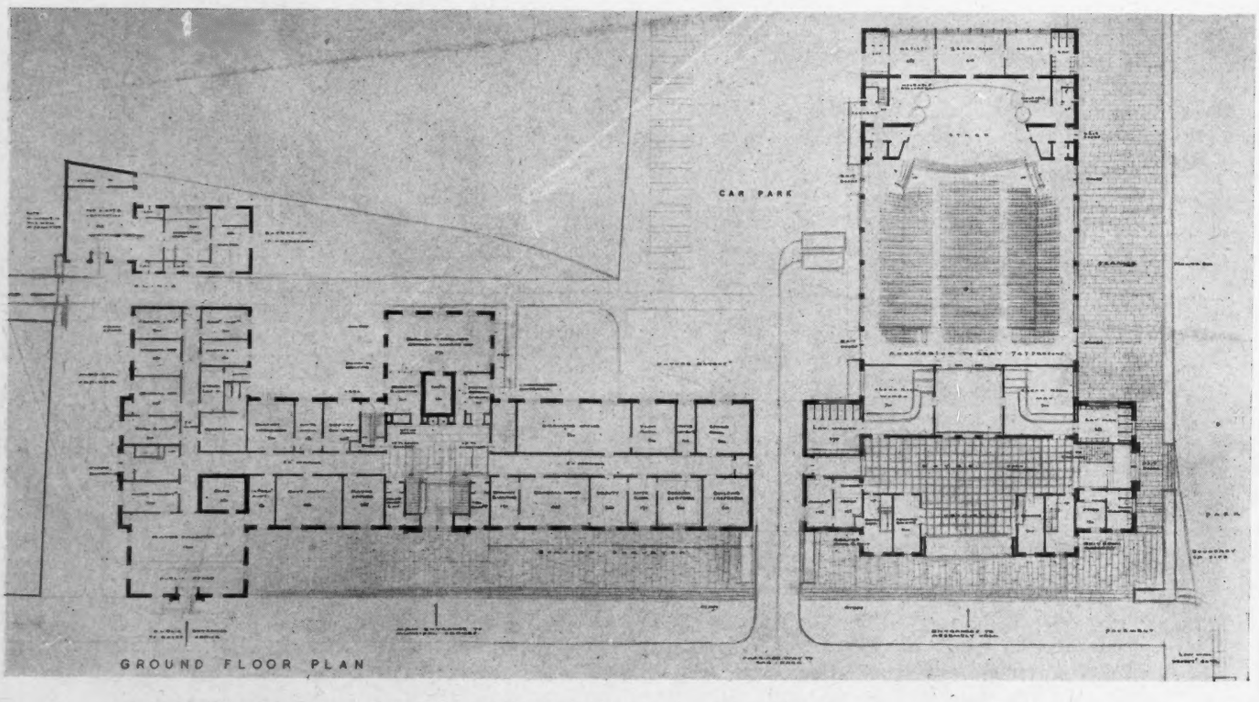
DARTFORD MUNICIPAL BUILDINGS AND TOWN HALL COMPETITION: Design placed Third.

BY MR. A. W. KENYON, F.R.I.B.A.

(See page 594.)


PUBLIC ENTRANCE TO RATES OFFICE
MAIN ENTRANCE TO MUNICIPAL BUILDINGS
CARRIAGE WAY TO CAR PARK
ENTRANCE TO ASSEMBLY HALL





DARTFORD MUNICIPAL BUILDINGS AND TOWN HALL COMPETITION: A Highly Commended Design.

BY MESSRS. LORIMER AND MATTHEW, FF.R.I.B.A.

(See page 594.)

DARTFORD MUNICIPAL OFFICES COMPETITION

THE fifty-five sets of plans submitted in this competition, which are now on view at the Masonic Hall, West Hill, Dartford, make one think that the recent criticisms of the architectural schools have some foundation.

In this competition we have a problem which is constantly recurring: the block of municipal buildings, clinic and assembly hall. Yet not one of the solutions submitted satisfies the three essential conditions—good plan, good elevation, moderate cost. It also demonstrates the desirability of including the rate per foot cube for estimate of cost as one of the conditions. As will be seen by a reference to p. 522 of our last issue, some of the rates taken by competitors in the premiated and commended designs are much below the actual figure that would be required. At the date of our visits to the exhibition competitors' reports were not available, so no comment on other estimates of cost is possible.

Taken as a whole, the plans submitted do not reach a very high standard, and, with one or two exceptions, the front elevations fail to achieve a satisfactory solution of the combination of two of the three elements of the plan into a coherent architectural composition.

The majority of the competitors have got into difficulties with the two main entrances to the municipal offices and the assembly hall in their elevations, and in their planning have also experienced difficulty in connecting these two units.

We give below some brief notes on the designs.

No. 34 (winning design, by Mr. Donald G. Walton, A.R.I.B.A.).—A good, compact and economical plan on two floors, with caretaker's quarters and public galleries to council chamber in addition on second floor.

Rates and borough treasurer's department with separate entrance and well-planned public space, etc., to left of main entrance on ground floor. Borough surveyor on right, clinic at rear, and assembly hall on extreme right (south end of site).

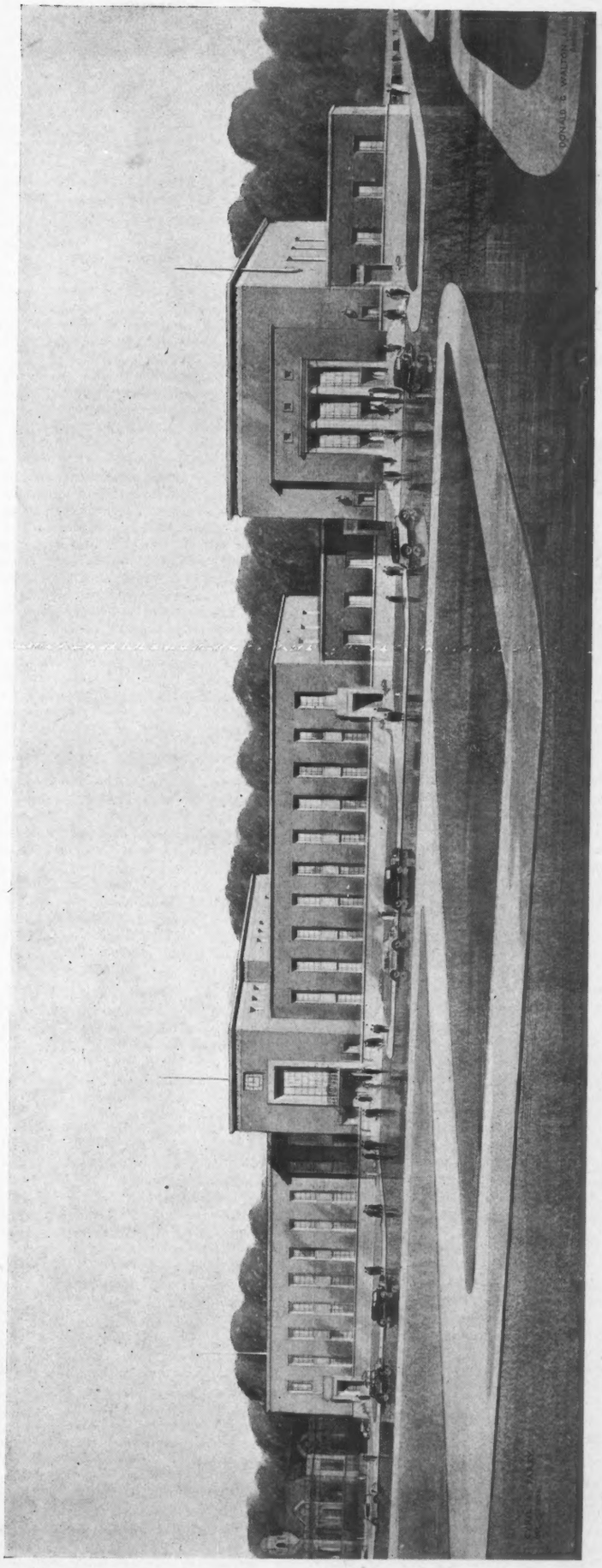
Council chamber and suite on first floor, well-planned and good communication with town clerk's department, placed over borough surveyor. Public gallery rather small, but has separate access from street. This also applies to caretaker's quarters.

No. 13 (design placed second, by Mr. Charles H. Pike, A.R.I.B.A.) has also a good economical plan. Rates office not so good as winning set, but future extensions well studied. Access to town clerk's department and public gallery could be improved, but communication with assembly hall is well arranged. The elevations are poor and lack scale; fenestration has not received sufficient attention.

No. 6 (design placed third, by Mr. A. W. Kenyon, F.R.I.B.A.).—This is also a good plan, and lighting and aspect of rooms have been studied. The weak point is the connection with assembly hall and ground floor by covered way across access to car-park, which would be dangerous. Connection at first-floor level is by a bridge and is quite adequate. The elevations are quite pleasing but hardly strong enough and rather lack cohesion.

No. 19 (commended) has a good elevational treatment and has solved the problem of the two entrances successfully. The railings to balconies on first floor seem rather too utilitarian. Plan interesting, but not sufficiently compact for economy in cost and working.

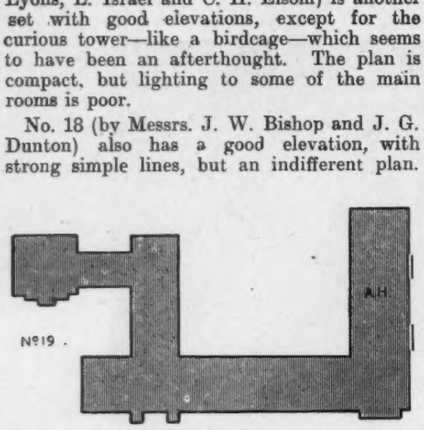
No. 30 (commended, by Messrs. Lorimer and Matthew, FF.R.I.B.A.).—This set is remarkable for the beauty of its elevational treatment and is the only one in which the building appears as a really coherent architectural composition. The plan, however, has several defects and is not sufficiently economical. It is doubtful whether scheme could be built for anything as low as the figures given per foot cube.



DARTFORD MUNICIPAL BUILDINGS AND TOWN HALL COMPETITION: Perspective View.
MR. DONALD G. WALTON, A.R.I.B.A., Architect.

No. 7 (commended, by Messrs. E. D. Lyons, L. Israel and C. H. Elsom) is another set with good elevations, except for the curious tower—like a birdcage—which seems to have been an afterthought. The plan is compact, but lighting to some of the main rooms is poor.

No. 18 (by Messrs. J. W. Bishop and J. G. Dunton) also has a good elevation, with strong simple lines, but an indifferent plan.



BLOCK PLAN OF DESIGN.
No. 19 (Commended).

ILLUSTRATIONS

PLATES

New Flats, Northampton.

Known as Bedford Mansion Flats, this building provides 40 flats, arranged on four floors, the building being planned as three sides of a square embracing a small, formal garden. Of the flats, eight are bed-sitting-room flats, while 16 have a sitting-room and one bedroom, and 16 have an additional bedroom. All flats have a standard kitchen and up-to-date equipment, and also a well-fitted tiled bathroom. There is an entrance with stairs and lift on either wing of the Derngate front, connected on each floor by a corridor. This arrangement removes all need for external fire-escapes.

The flats are arranged so as to give a pleasant sunny outlook to all principal rooms. Outside balconies are provided for the central flats in Derngate. The building is faced with "Phorpres" rustic bricks, with dressings of artificial stone. Decoration is on simple modern lines, fluting and waved lines being the principal motifs.

There are several types of flats, containing from one to three rooms. Each flat has its own entrance hall, reception room, kitchen and bathroom. Bathrooms are tiled and have panelled enclosed baths, pedestal basins, recessed soap fittings, and heated towel rails. All flats have heated linen cupboards. Kitchens are fitted with modern kitchen cabinet with enamel flap table, cutlery drawer, cupboards, etc., and a built-in "Electrolux" refrigerator, cupboard accommodation, sink, etc., and gas or electric cookers may be hired from the respective companies. Both electric and gas points are provided, giving an alternative for cooking arrangements.

All flats are centrally heated by radiators in hall, reception rooms and principal bedrooms. All radiator heating is provided free, and corridors and entrance hall are centrally heated. All rooms have large windows, providing the maximum of sunlight. The inner flats have pleasant outlooks over a central lawn and fountain, around which the wings are built. Constant hot water is supplied to the baths, lavatory basins and kitchens free of charge.

Sir John Brown, K.C.B., F.R.I.B.A., and Mr. A. E. Henson, L.R.I.B.A., are the architects.

A House at Turville Heath, Bucks.

This house, which stands in six acres of land, has fine views over chalk downs and beech groves. The construction of the lower story is 9-in. brick walls, rendered in waterproof cement, covered with "Stic B." The upper story is of deal weather-boarding, painted white, on brick nogging in wood frames. The roof is covered with green glazed pantiles. An unusual feature is the covered balcony over the best bedroom. The site being remote, there are no services. Drainage is by septic tank. Electric light and pumping are from a small electric light plant. Water supply is from underground storage tanks which collect rain water. The internal decorations are simple, with a larger employment of bright colours than usual. The subsoil is chalk.

Mr. P. D. Hepworth, F.R.I.B.A., is the architect.

New Flats, 15, Portman-square, W.

This new block of flats has two main entrances, one being from Portman-square and the other from Portman Mews North, and these lead direct to the two main staircases, each of which is flanked by two fast passenger lifts. A spacious gallery connects the staircases on the ground floor. There are ninety-seven flats of varied accommodation, but all of a luxurious character. Additional maids' bedrooms are provided in the basement, to be let with the flats where required, and there are ten bed sitting-rooms with hall and bathroom. Separate service stairs and lifts lead direct to each of the apartments. Considerable care has been given to the finishing and fittings of the kitchens, pantries and bathrooms. A refrigerator is built into the lower part of each larder. The walls of the bathrooms are lined with glass panels up to the height of the door head, and the floors are tile paved. Some of the second bathrooms are provided with shower baths instead of the more usual type of bath. Each flat has at least one coal fire, with provision for fuel immediately adjacent to the kitchen door. The upper flats have access to spacious roofs, which are being transformed into gardens high above the noise and dust of the street.

Mr. W. E. Masters, F.R.I.B.A., is the architect.

Reconstructed Band Pavilion, Clacton-on-Sea.

The band pavilion at Clacton-on-Sea has lately been reconstructed. The entrance hall is approached from the Upper Promenade, is semi-circular in shape, and is flanked by two staircases curving down to the auditorium. The space below the hall is utilised for dressing rooms, and the outdoor stage adjoining, built facing the sea, rises the full height of the dressing rooms and hall. The auditorium is fan-shaped, with a raised covered colonnade down each side, and will accommodate approximately 1,500 people.

A large hall, 120 ft. long and 50 ft. wide, has its two long walls composed entirely of sliding and folding glass screens, thus allowing an uninterrupted view of the sea to the south and of the outdoor stage to the north, and the approximate accommodation (including the café) is 1,000 people. The piers between the screens and the walls converging on the stage are lined with "Vitrolite" graded from deep gold to pale primrose, with horizontal bands of green plate-glass. The piers are illuminated by concealed strip lighting. A special cross-battened maple dance floor is covered during the concert performances with green rubber carpeting. The hall has its own green "Vitrolite"-covered pay-box and crush lobby, entered from the pier approach. Easy slopes are provided for bath chairs at the east and west entrances.

The café is approached by three steps from the hall and is separated from it by a dwarf wall. The walls are entirely lined with "Vitrolite" as in the hall, except the seaward side, which has folding glass screens. A feature of the café is its staircase and "Vitrolite"-covered balustrade. A modern kitchen, with complete electrical equipment, adjoins the café. The roof of the hall forms a terraced sun deck, with seats facing the sea and the outdoor stage. Accommodation is provided for 750 seats.

The framework of the whole building is of steel, encased in concrete and roofed with pre-cast hollow reinforced concrete slabs. The main walls are of brick, faced with faience tiles. The roof and laylight of the main entrance hall are of steel and glass as are also the canopies over the entrance and the outdoor stage. A black and white terrazzo floor is laid in the entrance hall, and the floor of the auditorium is of red concrete. For acoustical reasons the external stage has been constructed of teak boards, caulked like a ship's deck.

Heating is by means of electric panel heaters let in flush with the ceiling, together with tubular heaters behind ventilating grilles in the hall and café. Stand and footlight microphones have been provided to both stages and are interconnected with both indoor and outdoor speakers. Six speakers are fitted flush in the ceiling of the hall and two are placed at each side of the outdoor stage.

Full stage lighting is provided to both stages, and semi-recessed bronze laylights illuminate both hall and café. Lighting is concealed between the glass roof and laylight of the entrance hall, and eight illuminated columns are fixed at intervals upon the sun deck. The cornices surrounding the auditorium are outlined by special sunlight "Neon" tubing, and this is also employed under the canopy at the main entrance.

Messrs. H. Smith and Son, of Clacton, were the general contractors, and the following firms were also associated with the work: Dawnays, Ltd., steelwork; The Stroncrete Manufacturing Co., Ltd., Bournemouth, concrete floors; Crittalls, Ltd., Braintree, steel casements; Clacton Joinery Co., sliding screens; British Challenge Glazing Co., roof glazing and canopy; Shaw's Glazed Brick Co., Ltd., Darwen, terra-cotta; A. M. Macdougall and Son, Glasgow, dance floor; Permanite, Ltd., asphalt; Hy-Rib Sales, centering for ceiling; Strand Electric Co., Ltd., stage lighting; The Mosaic and Terrazzo Co., Ltd., Newport, Mon, terrazzo; Richards Tiles, Ltd., Tunstall, Stoke-on-Trent, glazed tiles; The British Vitrolite Co., Ltd., "Vitrolite"; Hammond and Champness Ltd., lift (hand); Rowhedge Ironworks Co., Rowhedge, stage caulking; Smith's Furnishing Co., Ltd., Clacton-on-Sea, and Dunlop Rubber Co., rubber flooring; G. Johnson Bros., bronze work and glass balustrade; J. A. King and Co., pavement lights; Minimax, Ltd., Feltham, Middx, fire extinguishers; Bath Cabinet Makers Co., Ltd., curtains; Tannoy Products, Ltd., radio; The General Electric Co., Ltd., electric fittings; Mann Egerton and Co., Ltd., Ipswich, electrical work; Unity Heating, Ltd., Welwyn Garden City, Herts, electric heaters; The Claude-General Neon Lights, Ltd., "Neon" lights; Bayliss, Jones and Bayliss, Wolverhampton, wrought-iron railings.

Mr. W. Aiston, M.Inst.M.&Cy.E., is the engineer and surveyor to the Clacton U.D.C.

A Bungalow at Southbourne.

The exterior finish of this bungalow, which is on the Carbery Estate, Southbourne, Bournemouth, is cream cement, with tarred plinth. The roof is covered with Spanish tiles, and the windows have metal casements. The interior finish is ultra-modern, with the latest type of fittings. The cost of building was £750.

Messrs. E. W. Pearson, F.R.I.B.A., and Partners, are the architects.

Dartford Municipal Buildings and Town Hall Competition.

We illustrated on a special supplement to our last issue the winning design in this competition, by Mr. Donald G. Walton, A.R.I.B.A. The report of the assessor, Mr. P. D. Hepworth, F.R.I.B.A., was also given last week. We now illustrate a perspective view of the winning design, the designs placed second (by Mr. Charles H. Pike, A.R.I.B.A.), and third (Mr. A. W. Kenyon, F.R.I.B.A.), and a highly commended design (by Messrs. Lorimer and Matthew, FF.R.I.B.A.). A review of the competition is on page 593.

PROTECTION OF BUILDINGS AGAINST TERMITES

By P. C. HARRIS, F.R.I.B.A.

THERE is no insect pest that can cause such damage to buildings as the termite. Though it affords a serious problem chiefly to those whose lot it is to practise abroad, the fact that buildings destined for the tropics are sometimes designed or made in the United Kingdom may give it some interest to general readers.

Anyone who has seen a building in a state of collapse within a year of erection, or has had some cherished possession reduced to dust, can realise the extent of the problem. Information on the subject exists largely in the form of local reports bearing upon local conditions, materials and habits of the pest. The natives of the Colonies where termites occur, either through fatalistic indifference or religious respect for all life, have not in the past contributed much to the lore of the subject.

The general habits of these insects and their methods of attack upon buildings are, however, fairly universal, and on knowledge of these facts protective measures must be based. The problem is not dismissed by merely specifying "So-and-so's" preservatives.

Habits of the "White Ant."

Termites (misnamed white ants), of which there are over a thousand species, have a logical and efficient social system rather akin to the dreary destiny for the human race foretold by some prophetic writers. Their "termitaria," or nests, are certainly efficient "machines to live in." Formed underground, or built up as hillocks, these are constructed of earth particles cemented with saliva or fæcal matter, and become bases for their operations, which are conducted in tunnels of like construction for protection from their natural enemies, ants. The removal of earth for this purpose from below buildings is one of the sources of danger from these insects.

The quest for their natural food, cellulose, and the consequent destruction of decaying vegetation in which it is to be found, gives them their place in nature as necessary scavengers in countries where all is overbounteous. It has been shown that, when put to the test, they are capable of remarkable efforts to attain this food, having the power of producing secretions to act upon glass or sheet iron or to neutralise certain chemicals. They can make progress over corrosive or nauseating material by lining their path with certain excretions.

The belief of some African natives that timber for hut construction gains immunity when cut at certain phases of the moon may have a scientific foundation in some change that may exist in the nature of the sap at these times.

The Different "Castes."

A colony of the species which is dangerous to buildings generally comprises five different castes—"kings" and "queens" (sexed and winged), "intermediates" (sexed but wingless), "workers" (sterile), and "soldiers" (female). The winged variety are the chief pioneers of new colonies, and discard their wings on settling down. In this stage they are the most active source of danger to buildings not otherwise threatened, and are also most vulnerable to their enemies. They are even collected and eaten by some African natives. The "intermediate" caste either deputises or attacks from underground.

Entry can thus be effected into buildings in the following ways: Through window and other openings and into roof space; from underground, through interstices in walling, and through badly constructed pipe and cable chases; from underground and, externally, by tunnels formed on wall faces; by means of little used external pipes; by means of creepers and adjacent trees; by material brought in by animals; by the use of infected material in building.

The damage caused by termites in buildings includes, in addition to the eventual destruction of all timber (even of the resistant kinds when sufficiently dry), the other results of their operations, such as the undermining of foundations and subsequent cracking of walls and solid floors, owing to removal of earth in nesting operations; the removal of mortar from inside walls; the splitting of plaster from wall surfaces through burrows driven between the two; the destruction of the insulation of electric wiring (sometimes causing fires); leakages in drains through removal of earth bed or stoppages of pipes with nesting material. The undermining of foundations may occur even in buildings devoid of timber when near vegetation. Termites do not appear to be active on sites on foreshores or reclaimed land.

Protection of a New Building.

In considering the protection of a new building, the first precaution of selecting a site of reasonable immunity cannot often be considered, but some steps can be taken in preparing a given site, though they can at best be but temporary. These often consist of destroying nests on the site with explosives or by digging; poisoning the "queens" by distributing arsenical preparations on rags, etc.; removing vegetation and trees in the vicinity and especially grubbing up long roots; cutting of ditches around the site; burning grass, etc.

In the protection of the building itself the first consideration must be to provide against neglect, for by constantly clearing away visible signs of the creature's activity, such as tunnels, etc., by removal of birds' nests, creepers, overhanging branches, etc., and by cleaning out pipes, much damage may be averted.

A building constructed without timber, or with the minimum only, is of course the most to be desired, but even in such case the contents are still liable to attack (generally in positions escaping observation, such as behind bookcases) unless other precautions are taken as well.

In connection with the elimination of timber, it may be noted that under tropical conditions, where the erosive effects of northern weather are absent, concrete or worked masonry can supplant timber in many cases. Window shutters, for instance, can be hung direct to pre-cast concrete frames satisfactorily and, in cheaper work, door frames or linings can be omitted—draught exclusion not being requisite. Metal can, of course, be used in the case of some joinery items and, where the conditions allow of the expense and delay of importing manufactured articles, is generally desirable

Deterrents.

Among the means of deterring termites, the use of creosote or other timber preservative perhaps first presents itself. Preservatives are, however, of little permanent value unless the timber is thoroughly impregnated under pressure and then when cut to exact dimensions required. This is rarely possible in ordinary work. When merely painted on, the closest supervision is required to see that ends and butt joints are properly treated. It is quite common to find members so painted intact outwardly but crumbling to dust at a pinch.

Teak and certain other timbers are resistant to termites owing to natural oil in their structure, but when this has dried out with age, or when subject to a mass attack, they eventually succumb. The writer has seen a new teak floor badly attacked within six months of construction. Oak and also the soft woods used in northern construction are non-resistant.

Preventives.

Though preservatives have their value, it is better to aim at preventing the insects from reaching the timber by such means as the following:—

1. To avoid cracks through partial undermining of the site by burrows; foundation concrete, unless carried to some depth, should be reinforced, as also should be the concrete of solid ground floors. Drains should likewise be laid on concrete.

2. If possible the concrete of solid ground floors should be put in at the same time as the walling and carried over walls and without openings. Otherwise shrinkage of concrete away from walls may form interstices for the passage of the insects.

3. Unbroken courses of concrete, about 3 in. thick and preferably reinforced, should be formed in all walls under floor joists and wall plates. In cheap work sheet metal projecting beyond the wall and turned down can be used under wall plates provided that abutting sheets are joined in some way to avoid interstices.

4. To check the formation of tunnels on external walls, an apron of brick or masonry on unbroken concrete should surround the building and preferably be checked into walls. This can take the form of a continuous gutter to receive rainwater, which has the advantage that the flush of occasional rains removes any built-up tunnels of the insects creeping across the apron towards the wall.

5. Rainwater pipes and other external pipes should be kept well clear of walls and end with shoes a good distance from the ground, so that heaps of leaves, etc., may not form ladders to the pipe opening—a frequent cause of termites infecting a roof.

6. To exclude the flying variety of termite (and incidentally mosquitoes) all openings into roof spaces should be covered with strong metal mosquito gauze. Eaves should be carefully boxed with material other than timber and should be designed with a view to discouraging the nesting of birds and hornets, etc. Tiling should be torched on the underside if liable to leave openings. All ventilators to floor spaces should be similarly treated and kept as high as possible above ground, though solid ground floors are much preferable. Cavity walling is not desirable.

7. The growth of creepers should be prevented, and all copings, string-courses, etc., should have the minimum of crevices in which vegetation brought by birds could take root.

8. Where possible, gutters should be avoided as, during the long dry seasons, these harbour dead leaves, etc., which are an incentive to termites, and also cause stagnant pools in which mosquitoes breed.

9. Where chases are cut in plastered walls for wiring or other services, any spaces caused by shrinkage of the infilling from the surrounding plaster should be made tight before finishing coat is applied. The writer once found that failure to do this was the cause of a new building being infested. It is not, however, often desirable to conceal such pipes or wires.

10. In general, straightforward construction with the minimum of hollows and inaccessible corners should be employed. This is now recognised as advisable in any climate, but is doubly so in the tropics where, in addition to termites, multifarious other insect pests can add to the discomforts of life.

A Rhodes Museum, Bishop's Stortford.

A movement, initiated by the Salisbury and Bulawayo Rotary Clubs, and supported by friends in Capetown and London, has been launched to acquire the birthplace of Cecil Rhodes at Bishop's Stortford, Herts, for transformation into a national museum in commemoration of the life work of the great Imperialist. Several proposals, we learn, have been considered, but the one which is now generally favoured is the creation of a Rhodes Museum, which shall be stocked with relics collected from his friends and admirers throughout the British Empire. The promoters realise that the Rhodes Trust will always be the great living memorial to his life and work, but they consider that there is room also for an institution to house a Rhodes collection.

THE DESIGN AND CONSTRUCTION OF MODERN FACTORIES

By CHARTERED SURVEYOR.

FACTORY buildings were long noted for their lack of architectural interest both in regard to elevational treatment and planning, but since the war, as so many excellent industrial buildings have been erected, it can be said that modern factories have an important place in the field of architectural design. Possibly the following causes are largely responsible for the revolutionary change in design: (*a*) The improved working conditions and the advertising value of an imposing building, (*b*) specialisation by the designers, (*c*) the great range of excellent building materials available. The design of industrial buildings is a problem which calls for a working knowledge of the particular industry concerned, together with sound constructive experience and the ability to design artistically and economically. It is not then surprising to find that specialisation is an important factor in the designing of industrial buildings.

The Site.

The layout of a modern factory estate presents an orderly arrangement, which is no doubt due to the larger acreage available. This enables the designer to allot different portions of the site for the various buildings. The factory buildings proper are usually grouped together, whilst the auxiliary buildings, such as power houses, are often placed conveniently to the latter, but occupy an area in the rear of the estate.

Rural surroundings are now popular for new works, particularly for food factories, and the ideal site appears to be one situated on the outskirts of a large town but having easy access to enable employees to be within convenient reach of their work, and to obtain adequate power services. It is also important to have rail and/or water transport at the rear of the site, and for the ground to be reasonably level, on moderately high ground, and with a good dry subsoil. A higher value is obtained if the site has a commanding position and fronts a main road.

Type of Building.

While the general text of these notes concerns the multi-story type of factory, all the types in common use may be briefly considered and an endeavour made to analyse the reasons for the popularity of the various kinds of building. Obviously, the one-story type of factory is very suitable for the heavy trades and is the cheapest class of building if site values are disregarded. Should a north-light roof be used, excellent lighting is obtained, but mechanical aid is invariably required in lofty factories to produce good ventilation. In large buildings of this type it is difficult to obtain good elevational effect owing to the ratio of length and height being so divergent, but factories with north-light roofs can be made more pleasing in appearance if saw-tooth gables are avoided by the introduction of parapet walls. The latter also provides a space suitable for advertising matter, and so prevents the use of unsightly "sky-signs."

The multi-story type of factory is often preferred for the manufacture of light articles, especially where process work is carried on from floor to floor. In other instances the multi-story building is a result of a confined or an expensive site. While the cost is higher than other types, the multi-story building has a better advertising value and lends itself to pleasing elevations and good lighting, though it is probably more convenient to handle goods laterally than vertically.

Two-storied factories are becoming increasingly popular, and taking into consideration initial costs, together with ordinary trading requirements, this class of structure is very suitable where the ground floor is required for heavy machinery and the upper floor for assembling and packing, or offices and welfare rooms.

The Block Plan and Aspect.

On the open or rural site, the one or dual storied factories are invariably arranged in the rear and adjacent to the office building which fronts the road. The front elevation is usually treated more distinctively than the remainder of the buildings, and the planning ensures rapid supervision owing to the direct communication obtained.

With the multi-storied building, the block plan is usually arranged on the unit system, in which extension can be made as required, and the several buildings are linked together either on each floor or the upper floor levels. In this way it is possible to use the factories for different manufacturing processes with one despatch department. It is often convenient on large estates to arrange the lavatory and cloakroom accommodation between the units, thus preserving an unbroken floor in the several factories and ensuring a hygienic position for the sanitary arrangements.

It is important in multi-storied buildings to keep the various blocks sufficiently far apart to obtain good lighting and to prevent as far as possible an outbreak of fire from destroying the whole of the factories, but where modern fire-resisting construction is adopted it is usually found that if the distance between the units is a reasonable one for the purpose of natural lighting, the fire companies will allow full rebates, particularly where sprinkler installations, and/or drencher systems between the factories, are adopted.

To ensure good natural lighting in multi-storied buildings, the width should not exceed 60 ft. With regard to aspect, some factories, notably confectionery works, must not face south unless precautions are taken to exclude the sun, and in these cases the main elevations should preferably face east and west, but inside or outside blinds are also required. The outside roller blinds formed of wood laths are best, as they keep the glass cool and do not interfere seriously with the ventilation or lighting. Most modern factories, however, face north and south, and ultra-violet ray glass is often adopted for the welfare of the workers.

The subsidiary buildings should be placed at the rear of the site, but in a convenient position to the main buildings. Regarding boiler houses, it is better to arrange these at a somewhat lower level, to ensure the recovered water and condensate gravitating to the boilers. Where the site is in the midst of beautiful surroundings, the boiler house chimney can be taken inside a water tower, the lower stories of which can be used for water-softening apparatus or stores.

Constructive Features.

During the early post-war years buildings built wholly of reinforced concrete were predominant, but at the present time the steel-framed structure is very popular, owing to the speed of erection. The modern factory must, however, possess reinforced concrete floors for the purpose of carrying the heavier loads and their fire-resisting properties.

In the case of one-story factories, wide spans can be obtained by the use of either of the above materials, but with multi-story factories it is advisable to use spans of 20 or 30 ft. with bays from 10 ft. upwards in width.

In the modern daylight factories the wall columns are kept about 2 ft inside the external walls and the floor is cantilevered to carry the walls over. This enables the designer to obtain maximum window space, the windows invariably running the whole length of the building.

The encasing of steelwork is not yet compulsory throughout the country, but it is advisable for this to be done, and concrete or hollow tiles are suitable. Where beams are encased in concrete a favourable effect is produced upon the insurance rates, so that it is possible to reduce maintenance costs by somewhat increasing the initial cost.

The use of cellular bricks reduces foundation costs in the multi-storied factory without seriously interfering with the strength of the structure, and another advantage of such bricks is their additional insulation properties, which have an important bearing upon heating costs.

Loads and subsoils play the most important part in determining the type of foundation required, but it is the writer's experience that for moderately good ground a series of continuous grillage and reinforced foundations are very suitable without being excessive in cost. These run longitudinally under the lines of columns.

The flat roof is most suitable for the multi-story factory as it provides accommodation for water-tanks, motor-houses and plant-houses, which may be required for refrigeration or air-conditioning plant, and to this end it is advisable for the roof to be designed to carry a heavy load.

The roof is often used for the storage of water, and this has the advantage of keeping the roof cool, and prevents sudden changes in temperature from cracking the material underneath. All flat roofs should be insulated, whether roof water is stored or not, and this can be accomplished by the use of cork slabs or one of the many excellent insulating boards on the market.

Many flooring materials are available. It is significant that many firms have spent large sums of money endeavouring to find a material that is jointless, quiet, non-cracking and waterproof, and will stand up to heavy wear. For very heavy usage steel anchor plates are useful, though noisy, and a patent steel-concrete floor will stand hard wear without being slippery. Other floors of note are granolithic, concrete toppings with various patented compounds to prevent dusting, tiles of the quarry or patent variety, composition floorings which are only suitable for light use, maple or other hardwood blocks.

It is important in certain factories such as sugar refineries, dairies, pickle or jam manufactories, to specify acid-resisting floor toppings, as the various acids used in these works will destroy the concrete, often with serious results.

Fire-escape staircases can sometimes be built in permanent form, *i.e.*, encased within the main walls of the building, which will give a better elevational effect, though the cost is higher than the provision of metal escapes.

The various details enumerated under the Factory and Workshop Act, 1901, must be adhered to regarding cubic capacity per person, lavatory accommodation, etc., but it is advisable to calculate on higher figures than those given when designing a new building, so that the factory will conform with any further revision of the Act.

The provision of electric lifts is important in the design of a multi-story building, and it is usual to place a battery of lifts in a central position. If these are controlled by a push-button arrangement, the running costs will be reduced to a minimum, and facilities provided for the quick transit of goods when required, and in the event of a breakdown of one lift, ample hoisting apparatus will still be provided.

To prevent weakening of the reinforced concrete floors through cutting for the many pipes which must pass from floor to floor, it is useful to provide vertical pipe ducts throughout the building at various points. The walling can be of hollow-block partitions, which do not put a serious load on the floors and have a high insulation value. Access doors would be required for the inspection of the joints of the piping, and branches are taken from the main pipes direct to the various machines.

In very large multi-story buildings, the writer has found the advantage of using large horizontal pipe tunnels on each long side of the building, under the ground floor, and running the whole length of the factory. From these the vertical shafts would be connected, while the two horizontal tunnels also communicate by means of smaller ducts under the ground floor at regular intervals.

External Treatment.

External treatment has an important bearing upon the maintenance or running costs of the building. The reinforced concrete building, unless finished in a more decorative manner, claims to have a low maintenance cost. The brick-fronted factory, if built in cement mortar, can also claim to be economical, so that the chief expense is painting.

While metal windows are almost always the rule, owing to their larger glass area, combined with strength and appearance, more frequent preservative measures are necessary, and unless the windows are treated with one of the zinc-spraying methods before being fixed, it is difficult to prevent corrosion. Reinforced concrete windows are now obtainable, and though the bars are heavier than those of metal, very large windows are obtainable and the maintenance cost appears to be negligible.

The use of a white or coloured cement for wall surfaces is fairly general, and pleasing elevations can be obtained. The use of coloured tiles strikes an attractive note in factory elevations.

Other Considerations.

Windows should be designed to admit as much light as possible, and the opening portions should allow the cleaning of the outside face of the glass from the interior of the building. Gearing for opening the ventilators is preferable to cords. The glazing should be done from the inside of the factory, and it is better to specify wood beads than putty.

Where certain rooms contain machines which give off steam, a glazed canopy fixed over these machines, with an outlet to the open air, will prevent disfiguration of the decorations and maintain a healthier atmosphere for the workers. The glass to these canopies should be reinforced with wire or mica, or armoured plate glass could be used.

Certain plasters and paints will be found to resist steam or acids better than others.

Where heavy machines are fixed on suspended floors, a solid concrete bed, usually reinforced, should be provided. This will also give a hygienic floor, but where there is much oil or grease from the machines, the concrete base should be oil-resisting, as ordinary concretes will be seriously endangered.

In multi-story buildings of considerable size a large goods hoist should be provided inside the factory to enable large and heavy machinery to be taken from or to any of the various floor levels, in addition to its use for the quick transporting of goods.

Interior walls are usually flat pointed and painted, but a new form of cement glaze is now in use which gives a better surface on which to paint, and it is claimed that the first application of paint will stand on new brickwork if this material is used. A high gloss paint should be used in the finishing coat, as this "stands up" to washing.

Floors should not be designed to carry less than 2 cwt. per sq. ft. safe distributed superimposed load, and circumstances may require floors to carry as much as 6 or 7 cwt. per sq. ft. in warehouse or heavy factory buildings.

An excellent feature found in wholly reinforced concrete buildings since the advent of the "daylight" factory is the flat-slab type of concrete floor in which the ceiling maintains a line unbroken by beams. This enables ceiling decorations to be quickened up, and increases the natural lighting and reflection, while avoiding angles for dust to lodge in.

Angles of projections on walls or columns should be bull nosed, preferably the height of the rooms, and this applies to internal as well as external angles. A tiled, coved skirting to a white-glazed tiled dado is another necessity in modern factory construction.

AN EARTHQUAKE BUILDING CODE FOR JAPAN

FROM A TOKIO CORRESPONDENT.

ENGLAND is said to be in "the earthquake zone." Yet its buildings have never been designed with the idea of standing up against a seismic disturbance of any great magnitude. That is perhaps quite natural in view of its freedom from such calamities, zone or no zone. In Japan the situation is vastly different. For centuries earthquakes have occurred so often that they seem at all times to be a possibility. But notwithstanding that ever-present liability, up to the great earthquake which destroyed the capital city on September 1, 1923, there was very little scientific construction of anti-earthquake buildings. After that catastrophe, however, the late Viscount Shimpei Goto, the Minister of Home Affairs, set far-reaching plans in motion in order that never again could the capital of Japan suffer so disastrous a blow. The Viscount summoned to Tokio Dr. Charles A. Beard, of New York, one of the best-known city planners, who was already familiar with the narrow streets, tortuous alleys and flimsy buildings of old Tokio.

It is difficult for the newcomer to realise the fact to-day, but before the great earthquake the modern structural steel and concrete buildings of Tokio could almost be counted on the fingers of two hands. The old red brick structures, such as those in the Marunouchi district and the Government offices, had been built several decades previously, and, all things considered, they stood the earth shocks and accompanying fires very well indeed. These buildings are of massive construction, with great foundations and thick walls supporting the roofs.

The modern type of building, in Japan as elsewhere, consists very often of a steel skeleton and steel reinforced concrete, the actual walls being filled in and not carrying the weight of the floors or other parts of the building. It is constructed on the same general principles as the native Japanese house, although that is made of timbers and beams which were originally tied or dovetailed together. An even simpler example of this type of construction is the tent or tepee of the American Indian, where the "structure" consists of a few poles over which are draped canvas, furs or some other material which obviously plays no part in holding up the tent.

Moreover, the old Japanese building is not sunk into the ground, but the uprights rest on stones which have been grooved, thus permitting a unitary motion of the whole building when the earth is set in motion, and so forestalling one section from pushing against or pulling away from another and bringing about the breaking and collapse of the entire building.

These same general principles, on a magnified and scientific scale, are embodied in the Earthquake Building Code which Japan has evolved from its own sad and costly experience, and from a rational study of both building methods and earthquake damage in all lands. The large office buildings, department stores, and varied modern structures now so plentiful in Tokio, which are increasing in number almost daily, rest upon floating foundations of piling on which has been built a bridge-like raft. The building proper is then erected on this raft, with the result that it can tip, tilt, move laterally or even up and down and still remain a unit.

It is quite likely, therefore, that Tokio may have a dozen or more "leaning towers of Pisa" in future years, for these buildings are designed to move when struck by earthwaves very much as an ocean liner tosses safely about upon the waves. The earth does not always return to its original position, however, and some buildings may therefore be left standing at odd angles in the future, although the important point is that they would be left standing instead of lying in heaps of ruins.

The Plan for a Greater Tokio.

Several types of floating foundation are employed or, rather, several ways of constructing such foundations, since the general principle remains the same. One of the latest to be employed, and one now in great favour, permits heavy foundation pillars to sink of their own weight in the non-stable soil of the lower city until they are held firmly in place by friction. Another is that of driving long cypress piling, and still another is that of driving wedges, jerking them suddenly, and then pouring concrete into the opening left, which rapidly hardens into solid foundation piles. This latter method was used in the construction of the Imperial Hotel. The success with which that building stood up against the great earthquake would be legendary now if the tangible proof were not still in evidence. The influence it has had on Tokio's architecture has been considerable. What is less understood is that its influence on engineering methods has been as great or greater, and is not confined to foundation work alone but enters into other phases of construction.

The plan for Great Tokio, worked out under the direction of Viscount Goto, included much more than a better and more scientific building code, which may perhaps be the least evident and yet one of its most important points. The wide streets and boulevards which now form a basic network of transportation for the third largest city of the world, the numerous civic parks, the pavement and sidewalks—all these and other features of modern Tokio, which have become so common as to pass unnoticed, were almost entirely unknown not a great many years ago.

In fact, the changes which have been made in the physical appearance of the capital during the past dozen years are so remarkable and so general as to be almost incredible. It is difficult, indeed, to believe one's eyes. Those returning to the city to-day after an absence of, say, a decade and a half, would find comparatively little other than the magnificent grounds of the Imperial Palace, the elevated railway, the old red brick buildings and a few of the pre-earthquake parks which would be familiar sights. What the university lad of 1936 accepts without question continues to be little short of a marvel to his parents and grandparents.

Science to the Builder's Aid.

All of this is definite, and offers itself readily to the notice of the observer. What is not so generally realised is the scientific work which underlies it. The world at large is indebted to Japan, to no small degree, for having worked out a building code which promises greater security against earthquake damage than anything which man has heretofore known.

Professional engineers and architects generally are aware of this improvement, and give full credit to it. But the general public may be rather indifferent to or ignorant of it. It is one of the most convincing refutations of the old saying that the Japanese are wanting in the inventive faculty and do not produce a great deal except imitations.

While it is true that Tokio itself has spared neither money nor brains in working out an Anti-Earthquake Code, credit must also be given to the Japanese Government for substantial financial assistance to those complying with the specially devised building provisions.

What is needed now in Japan is a more scientific study of the earthquake problem generally in order to do what can be done, if anything at all, to guard against the disasters which for ages have been overtaking the land. Thus, between the scientists and the practical builders, a new era might open in this respect for Japan's many millions of people.

THE BUILDING EXHIBITION

THE KING AT OLYMPIA

H.M. the King (whose visit to the Exhibition on September 17 is reported on page 575) inspected a number of exhibits during his stay. Among the trade displays so honoured were those of Messrs. Crittalls, Messrs. Flavell's, the Steel Scaffolding Company, the British Steelwork Association, the British Granite and Whinstone Association, and the Canadian Government display. His Majesty then went by lift to the galleries, where are laid out the exhibits of the Housing Centre, the Building Research Station, the National Physical Laboratory, and the finished work of the trades training schools. He was especially interested in the Housing Centre work. Their display has been organised in collaboration with Mars (Modern Architectural Research Group) and A.T.O. (Architects' and Technicians' Organisation), Every stage of life—infancy, childhood, manhood, and old age—has its background of pictures, charts, and models. The King encountered frequent quotations from his own speeches on the housing needs of the country made when he was Prince of Wales. He was particularly interested in the one-room dwelling specially designed for old people.

The Building Research Exhibit.

The King also inspected the work being done at the National Physical Laboratory and the Building Research Station, and then went to the stand of the Army Vocational Training Centre. He also examined with interest the exhibit of produce grown under the Society of Friends' assistance scheme. Although this has only been in existence for a few years, it is stated that £1,000,000 worth of produce is grown annually and that 132,000 people have been helped during the present season to cultivate their allotments and cottage gardens.

VISITS BY SOCIETIES

On Tuesday members of the Institution of Structural Engineers and of the London Association of Master Decorators visited the Building Exhibition. Afterwards they were entertained to tea by Mr. H. Greville Montgomery.

Mr. R. S. Williams (President, L.M.B.A.), proposing a vote of thanks to Mr. Montgomery, said that when going round the Exhibition he had been struck by the number of the exhibits of finishing materials used by the builder. It was even more important for the decorator than for the builder to know all he could of the chemical and physical properties of these finishes, particularly in relation to their action on the decorative materials applied to them, and decorators owed a debt of gratitude to Mr. Montgomery for the opportunity which the Exhibition afforded of furthering their knowledge in this direction. The Exhibition contained many inventions having the saving of labour and time as their object. We lived in an age of hurry and bustle, and art was suffering in consequence. If part of the time saved by modern methods and appliances could be allocated to the decorator—instead of his having only two weeks out of a 20 weeks' contract—results would follow that would repay all parties.

Mr. W. H. Woodcock, A.I.S.E., seconding the motion, said he had been fascinated by the improvements in materials and by the speed with which building could be done. In safety and security also there had been a great advance.

Mr. P. C. Brooker, vice-president, L.M.B.A., supported the resolution, and the vote of thanks was unanimously accorded.

Some Exhibition Reminiscences.

Mr. Montgomery acknowledged the compliment, and said that unless people connected with building gave their sympathy and practical assistance the Exhibition would be no good at all. It was not organised for the mere sightseer. It needed the support of the specialist in every trade, and had been able to secure that support during all these years. Looking through the catalogue of the Exhibition of 1895 he saw that it contained 24 well-known names and others which had since disappeared. To-day, there were nearly 400 names. Casting his mind back, he remembered the "rag and stick" stands—a piece of bunting on which were stuck some paper letters—and going round to-day he noticed the wonderful advance that had been made, particularly in the decorative stands. The story of how he had commenced was an extraordinary one. Forty years ago his brother had started a paper, and he (Mr. Greville Montgomery) had gone to a building exhibition at the Agricultural Hall, and in his brother's journal had "slated" that exhibition. Its manager had called upon them in consequence and invited their co-operation in producing another and a better one. This offer was accepted, and a meeting arranged at the Agricultural Hall. Mr. Montgomery and his brother had kept the appointment but the other gentleman had not put in an appearance, and, in fact, nothing more had been seen of him The managers of the Agricultural Hall had asked the young Messrs. Montgomery if they were willing to organise an exhibition, and they had agreed to do so. They had been able to get £1,000 from friends, besides invaluable assistance and advice from an army of loyal architects, builders, decorators—in fact, everybody in the trade. They had organised the Exhibition, declining to give space for fountain pens and the like, and the Exhibition had succeeded and gone on ever since. The greatest honour it had ever received was the recent visit of the King. This had been a very friendly and informal visit. His Majesty had come because he wanted to do honour to the building trade.

WOOD FIBRE BOARD

In the Cinematograph Hall at the Building Exhibition, Olympia, last Friday, Mr. C. W. Glover gave a lecture on "General Uses of Wood Fibre Board." He said that the difficulty of obtaining natural woods in large dimensions and flat surfaces, free from defects and properly seasoned, dry and quite stable in construction, had led to the introduction of reconstructed wood. There were three main varieties: (1) Those built up from three or more thin plys or veneers; (2) those built up with laminated core and surface veneers,

THE STAND OF KERNER-GREENWOOD & CO., LTD.

and (3) those constructed from pulverised, refined compressed fibres.

In this last class of wall boards there were again two principal sub-divisions: (*a*) Built-up boards consisting of laminations of wood pulp board cemented together. These might be waterproofed in manufacture, waterproofed subsequently by an application of size or other suitable medium, or laminated with the interposition of waterproof sheets. (*b*) The second principal group of fibre boards was those constructed of wood or other vegetable products, finely divided and again synthesised into homogeneous board. The low-density boards had high insulating values, whereas the high-density boards had greater strength, at the sacrifice of insulating properties.

By far the most widely used material was wood, and as the percentage of cellulose contained in various woods differed considerably, and also the nature of the woods and other constituents affected the product, the choice was limited commercially to a very few of the softer woods. Poplar contained approximately 63 per cent. of cellulose, whereas ebony only contained about 30 per cent. cellulose. Spruce was the wood most widely used, and in this country the pulp used in board manufacture could either be imported or (as in the case of Messrs. Edward Lloyd Wallboards, Ltd., at Kensley Mill) manufactured from imported spruce logs.

The lecturer then described the manufacture of reconstructed wood, dealt with the properties of wood fibre board, and described tests carried out on various types of board.

Uses of Fibre Board.

The uses of insulating fibre boards, he proceeded, were as follows: (1) General building board: (*a*) Wall board as a constructional element; (*b*) wall board as a casing in lieu of plaster; (*c*) as a plaster base; (*d*) as a layer for thermal insulation; (*e*) as a layer for sound insulation; (*f*) as an acoustic lining; (*g*) as a resilient layer under the floor finish; (*h*) as permanent shuttering for concrete work; (*j*) special uses in packing, film-set making, etc. (2) Special thermal insulating board: for conservation of heat, preservation of cold, and economy in fuel.

THE STAND OF THE EDUCATIONAL SUPPLY ASSOCIATION, LTD.

Sound Absorption.

The modern tendency to hard, flat interiors devoid of mouldings aggravated acoustic defects and necessitated corrective wall treatment, whilst the general increase in noise rendered its abatement by absorption of paramount importance. Lloyd's fibre insulating board was a suitable material for this treatment, and its acoustic properties would be improved by carving.

Showing a graph of the sound-absorbing co-efficients of fibre boards, the lecturer said that more pleasing effects were obtained by speech and music in auditoria if the reverberation period was increased slightly, both in the higher and lower registers.

In order to obtain the maximum sound insulating value of the material it should be installed upon packings of fibre board, which themselves were resilient, and which prevented hard structural contact between the surfacing and the wall itself. Furthermore, the air space behind the board was of considerable value, inasmuch as any sound which passed through the board suffered inter-reflection and continued absorption within the air space. Further, as the motion of the air particles in contact with the hard wall was reduced to zero, the absorbent, being placed some distance from the hard reflecting surface, acted upon the air particles, which were more violently in vibration under the action of sound. It had generally been assumed that fibre board installed in this way had an absorption co-efficient of as much as 50 per cent. more than if installed on the solid.

Reverberation Characteristics.

The scope for the use of insulating fibre board in noise abatement could not be overestimated. It was true to say that there were many acres of ceilings in noisy offices which should be rendered acoustically absorbent. Street noises entered the windows and were reflected down to the occupants in the room from the ceiling. If, therefore, the ceiling was made absorbent, the noise level in the room was considerably reduced. As much as 7 decibels reduction might be obtained by treatment in this way.

THE ASCOT GAS WATER HEATERS' STAND.

MR. RODNEY THOMAS, A.R.I.B.A., Architect.

(See page 601.)

With regard to sound insulation, the reduction given was considerable, although the best results were always obtained in practice by the use of a fibre board in combination with other materials.

Thermal Insulation.

The domestic coal stoves and heating appliances at present in use delivered to the house interior at best only 60 to 70 per cent. of the total heat in the fuel, and the economic use of the available heat was almost entirely a matter of efficient insulation.

In cold storage and refrigeration plants, where a temperature was maintained from 10 to 80 deg. below the outside temperature, it was found economical to use anything from 6 in. to 8 in. thickness of highly insulating material, yet the majority of householders in this country attempted to maintain similar temperature differences in the winter without the provision of any effective insulation whatever.

Provision of suitable insulation in houses effected a saving in fuel costs of anything up to 40 per cent., and the cost of the installation of the thermal insulation was usually recovered in the first heating season. The cost of insulating a new house would vary considerably, according to the variety and thickness of insulating materials used, but it seldom exceeded 5 per cent. of the total value of the building. Nine-inch walling, insulated with ½ in. of plastered insulating fibre board, as compared with 9 in. solid brick walling on a typical six-roomed semi-detached house, gave additional thermal insulation sufficient to show a saving of one ton of coal per annum. If housing generally were similarly insulated throughout the country, a saving of the domestic coal bill would total approximately £20.000.000 per annum. The insulation of roofs was the most fruitful source of economy in fuel.

Costs of Sound Absorption.

In comparing the costs of sound-absorbing materials, it was not sufficient merely to consider the cost of the material per sq. yd., but fixing and finishing costs, together with the area required, must be considered. The prices of materials should be compared on the basis of cost per 100 open window units of absorption for the " finished " work.

The Economy of Noise Abatement.

Noise abatement invariably resulted in an increase in efficiency, the value of which could be definitely assessed. A 5 per cent. increase in efficiency effected in noise abatement by acoustical treatment in an office was representative of a saving of 5 per cent. unproductive expenditure in wages. The acoustical treatment usually worked out at 50 to 60 sq. ft. per employee, and on this basis the cost of the acoustical treatment did not usually exceed half the first year's saving. Acoustical fibre board ceilings were easy to apply, cheap and efficient in use.

In matters of practical construction, thermal and sound insulation must be considered together; indeed, true economy in construction was not obtained unless the most economic degree of insulation to heat and sound was simultaneously provided.

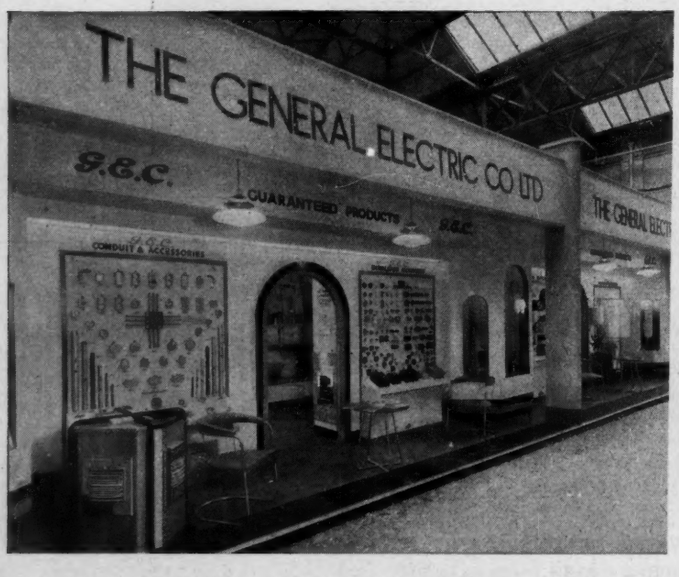
ONE OF THE STEEL SCAFFOLDING COMPANY'S STANDS.

Uses of Hard-pressed Boards.

The present uses of hard-pressed boards might be summarised as follows: (1) Wall panelling; (2) box making; (3) furniture making; (4) shuttering in concrete work; (5) door making; (6) body building for motor and rail vehicles; (7) finishings in ship building.

Architects as a class were now more ready to accept hard-pressed synthetic boards as substitutes for hard and soft wood finishings, and the modern tendency to simplify mouldings to the plainest trim sections rendered it possible to market hard-pressed skirtings, mouldings, etc. This opened a big field for development. Boards impregnated with bituminous emulsions possessed special weather-resisting properties, and were more flexible than standard boards. There was likely to be a growing demand for boards of this kind.

The possibility of impregnating the boards



THE GENERAL ELECTRIC COMPANY'S STAND.

THE STAND OF BRITISH PLASTER BOARD, LTD.

with oil, alcohol, resin, casein products, etc., opened up a wide field for the production of economic substitutes for all kinds of insulating and metallic products, such as those for which "Bakelite" was so widely used to-day.

SCHOOLS EXHIBITS AT OLYMPIA

THE JUDGES' AWARDS.

THE judging of the students' work exhibited in the various trades' training displays in the Gallery at Olympia took place on Friday afternoon, when the following results were declared :—

The Worshipful Company of Blacksmiths.—Prize of £2 2s. for the best piece of Hammered Ironwork. Awarded to the Army Vocational Training Centre. Aldershot, for Fire Basket, Dogs and Log Fork made by Lance-Corporal J. Wattam, of the West Yorks Regt., and Gunner J. R. Castle, Royal Artillery.

The Worshipful Company of Founders.—Prize of £5 5s. and a copy of the Founders' Medal. Awarded to the Army Vocational Training Centre for Cast Lead rain-water head and drain-pipe by Corporal H. Baker, of the Royal Signals, and Bandsman G. Betts, of the Durham Light Infantry.

The Worshipful Company of Turners.—Silver Medal for the best Turned Work exhibited. Awarded to the Army Vocational Training Centre (Collective Exhibit).

The Worshipful Company of Masons.—Prize of £5 5s. and a Silver Medal for the best finished work exhibited in Masonry. Awarded to Harry Carter, aged 28, of the Trades Training School, Gt. Tichfield Street, W.1.

The Worshipful Company of Tylers and Bricklayers.—Prize of £5 5s. and Diplomas awarded as under :—

L.C.C. School of Building, Brixton, £1 1s. for Circular Chimney in Rough Brickwork to be divided, and a Diploma to each boy (16-17 years of age) ; L.C.C. School of Building, Hammersmith, £1 1s. for Brick Doorway and Window arrangement, to be divided, and a Diploma to each boy (14-16 years of age) ; Trades Training School, Gt. Tichfield Street, W.1, £1 1s. and Diploma for Square Plaster in gauged brickwork ; Army Vocational Training Centre, Aldershot, £1 1s. and Diploma each to Pte. Webster, Royal Scots, Pte. Hildersley, Gordon Highlanders, and a Diploma to Pte. Brydon.

Directors of the Building Exhibition, for general Lay-out of Stands.—Army Vocational Training Centre, Aldershot, £5 ; L.C.C. School of Building, Brixton, £4 ; Southend School of Arts and Crafts, £3 ; L.C.C. School of Building, Hammersmith, £3 ; Northern Polytechnic, Holloway, £3 ; Kingston Technical College, Kingston-on-Thames, £2 ; and Trades Training School, Gt. Tichfield Street, W.1, £2.

Pewterers' Prize of £20 and Special Prize of £5 awarded as follows :—

THE STAND OF TURNER'S ASBESTOS CEMENT COMPANY.

L.C.C. school of Building, Brixton.—Sheet lead work and lead burning, £5 ; sheet copper work, £5.
Army Vocational Training Centre, Aldershot.—Ornamental lead work, £5.
Northern Polytechnic, Holloway, N.—Copper tube work, £5 ; ornamental lead work (special prize), £5.
Worshipful Company of Plumbers.—Prize was divided between :—
L.C.C. School of Building, Brixton, £2 12s. 6d.
Northern Polytechnic, Holloway, N., £2 12s. 6d.

EXHIBITION NOTES

Ascot Gas Water Heaters, Ltd.

The lay-out of stand Q.268 was limited to some extent by the existing balcony stanchion which comes down on to it, and the plan was laid out in the form of an H so as to conceal the stanchion and bring all the flues up centrally on the stand, and have the display of Ascot gas water heaters set back so that they could be demonstrated. The two sides of the stand are constructed as screens, which contain the smallest form of Ascot water heaters which do not require any flue. The underside of these screens has been utilised on two sides for the troughs into which the smallest types of heaters discharge, and the other two sides as photographic displays. Owing to the variety of exhibits which had to be incorporated, the design of the stand was kept as simple as possible, and the frame which links all the heaters together was provided in order to separate them from the other items, such as baths and sinks, which do not strictly form exhibits proper but had to be provided. This frame is picked out in red, together with the lettering. The walls are grey, to give a contrast for the white heaters. The lighting is of the indirect type, so as to avoid spots of light interfering with vision. The general finish of the stand is roughened, so as to obscure any joints in the ply finish and to make a contrast to the smooth finish of the exhibits. The four mural photographs were designed by Mr. J. Havinden to give a general impressionistic idea of the great range and scope of the heaters. Ascot gas water heaters of each type are in operation on the stand, instantly heating a continual stream of water for baths, basins and sinks. Of special interest to architects and builders are the technical models showing suitable flue installations, also the working model illustrating the Ascot multi-point heater in use as an alternative to an existing coke-fired hot-water system.

THE IMPERIAL CHEMICAL INDUSTRIES' STAND. Mr. H. St. JOHN HARRISON, F.R.I.B.A., Architect.

London Brick Company, Ltd.

On the stand designed by Mr. Julian Leathart (J.173), to display London Brick Company products, there is an interesting piece of construction in the form of a cantilevered brick canopy projecting from both sides of the central block of the stand. In nearly all the earthquake areas of the world, reinforced brickwork has been used extensively, but its possibilities in normal building work have not yet been fully grasped. The example incorporated in the stand is that of a cantilevered slab, which has been fully calculated by Hugo Filippi, consulting engineer, U.S.A., and properly built with the essential principles of reinforced brickwork kept in mind at all stages of the work. The slab, as built, is 7½ in. thick, this thickness having been adopted for architectural reasons, but structurally the slab could have been 4½ in. thick. It consists of a bottom layer of bricks on edge, a ¾-in. horizontal mortar joint containing cross reinforcement and an upper slab of bricks laid on the flat in courses with reinforcing rods in every course. The rods in the upper layer of bricks take the tensile stresses, those in the central mortar joint give the necessary cross tie, and the

compressive stresses are taken up by the lower part of the upper brick layer, the central mortar joint and the lower layer of bricks. The mortar and grout used to obtain the necessary strength and workability is a mix of 3 parts (by volume) of cement, 1 part grey hydrated lime to 10 parts of sand. The lower layer of bricks is in reality hanging to the underside of a reinforced brickwork slab, and hanging, too, only by the adhesion of the mortar to the brick. Actually, all the joints in the two courses were grouted, a procedure shown by recent reports of Canadian research on brick-mortar adhesion to give maximum

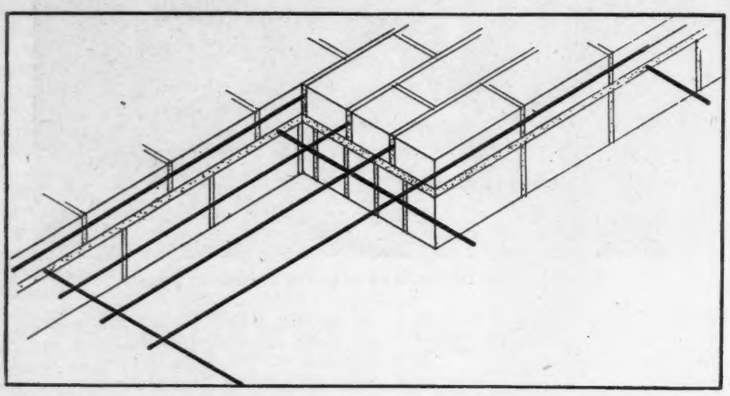


DIAGRAM OF CANTILEVERED BRICK CANOPY.

resistance to shear. This particular example may be taken as a good demonstration of what can be done with reinforced brickwork, but not, perhaps, one which would be repeated exactly in everyday practice. There are undoubtedly great possibilities in the development of this form of construction for panel walls, self-supporting partition walls, lintels, canopies, floors, bulkheads, stairs, balustrades and many minor structural details met with in normal building work.

Air-conditioning.

Air-conditioning for the private house or smaller public building is a branch of progress which hitherto has not attracted a great deal of attention in Great Britain—though larger buildings, such as theatres, cinemas, office blocks, and so forth, are normally so equipped. By air-conditioning is meant not, of course, merely forced ventilation, but forced ventilation *plus* "corrected" air, warmed or cooled, as may be desired.

The value of such installations for the private house, flat, small restaurant, etc., is becoming better known of late, however, and the movement should be furthered by the appearance of several types of cabinet, which are a handsome addition to a room and take up little more space than the normal radiator.

At least two firms are showing these cabinets at the Exhibition. Kelvinator, Ltd., are displaying (Stand P. 261) several models of this floor type cabinet unit. There are in all seven models, four with thermostatic control and three with both thermostatic and humidistatic control (the latter feature giving positive control of dehumidification). The fan motors are fitted with 3-speed control, and thus three differing air-conditioning capacities in each unit are provided. In six of these models (of which the largest is only 42¾ by 17 by 34½ in. dimensions) heating equipment can be fitted, and a humidity spray incorporated if necessary. Performance features of the complete plant are maximum cooling capacity, sustained dehumidifying, adequate cleaning, positive air distribution without draught (achieved by angular air discharge in proportion to height from floor); and automatic control. The cabinets are of steel finished in dark grained walnut, rust-proofed, and quiet operation is claimed due to special internal sound insulation. Refrigeration machines from ½ to 5 h.p. are available for operation in connection with these units, "Freon" being the refrigerant used. A number of self-contained room-cooling units are also on show. Architects and builders, especially for flats and the larger house, should not miss this display, nor should they fail to visit the plant on the Utilities (London), Ltd. (Stand O. 245), where cabinets for similar purposes are shown. These cabinets are handsome but unobtrusive, and the "Servel" system of air-conditioning which they contain successfully performs the function of control of temperature, humidity, circulation, ventilation, and cleaning of air. Models include a floor type (either incorporating the motor or designed for remote power operation—the latter system being recommended for domestic use) and a suspended type for inserting in wall or ceiling where it is not desired to have an external cabinet. In addition to these

A FLOOR-TYPE HEATING CABINET.

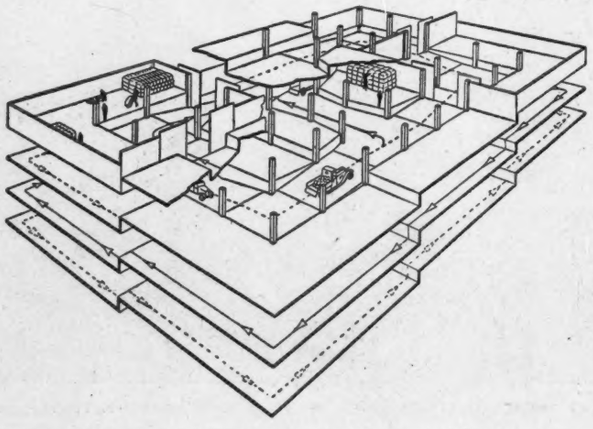
cabinets examples may be seen, or details obtained of, engineering services for large buildings.

Illustrated is a view of the "Servel" electric convection heater. The elements are specially constructed, guaranteed for five years, which are in turn loaded inside copper-finned tubes. The complete heating units are contained inside a sheet-steel casing constructed to form a streamline flue, and in this instance, as the bottom of the casing, a silent intake fan is fitted to ensure the correct flow of filtered air over the heating elements. The effect is to produce a large volume of moderately heated air, which flows through the grill which extends completely round the cabinet, which, if desired, can be placed in the middle of the room, or, if desired, stand againsnt a wall, a shutter device closing the back grill and restricting the heated air flow to the front and side grills. These cabinets can be supplied with heating elements for 3, 4 or 5 kw., according to requirements. In summer, the fan only may be used to permit air circulation and filtration.

A Novel Building System.

Shown for the first time at the Building Exhibition is the Hoenig building (Stand G. 128), a highly ingenious yet simple method of planning for certain types of building. This provides a solution to the problems of making the maximum use of the available floor area of a structure, while eliminating the street congestion arising from the stationary vehicles parking, loading, or unloading goods. At the same time the system is claimed to cheapen the cost of construction.

No provision is made in the normal building to enable access to the upper floors by vehicles, with the exception of garages. The result is that all vans with goods or cars for visitors or customers must remain outside the building while goods are transported or the drivers are occupied inside the building. The advantages of being able to drive a car or lorry direct to the floor required need no emphasis, and the Hoenig system is designed to permit this by introducing the primary principle of the division of the floors at progressive levels throughout the building. Each floor consists of a succession of independent sections connected by ramps developing easy gradients. No floor section exceeds a height of 36 in. above that of the preceding section. This figure of 36 in. is the maximum required in any building constructed on the Hoenig principle. Warehouses, market halls, factories and other buildings can be designed with a rise of 21 in. or even less. Contrary to the customary practice of employing independent ramps, spiral or otherwise, the Hoenig system offers the original solution of providing within the floor itself the means of uninterrupted transit throughout the entire building, both for ascending and descending traffic. By the intersecting of the two tracks the successive floors of each track form an uninterrupted drive-way independent of each other for upward and downward traffic. Access from one track to the other is made across the centre sections of the composite building where the levels of the two structures coincide. This central cross-over at every story is one of the prin-

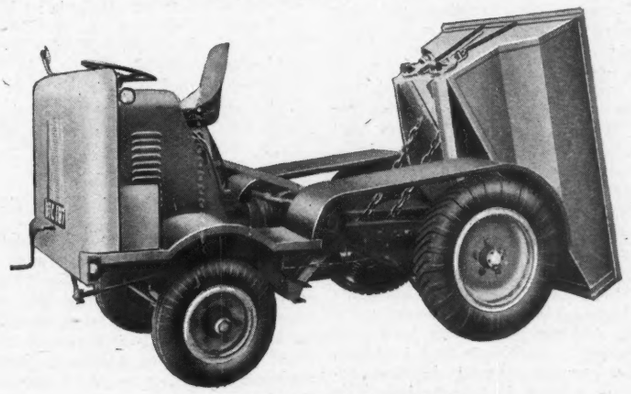


THE HOENIG SYSTEM APPLIED TO A WAREHOUSE BUILDING.

cipal advantages of the Hoenig system. It enables a change of direction to be effected readily and quickly without any delay or obstruction of the traffic flow. The advantages claimed for the system (one application of which to a warehouse building is illustrated) are :—(1) Greater utilisation of site area as compared with any other form of building construction; (2) considerable saving of space, with consequent and obvious advantages; (3) one-way travel with expeditious change-over from ascent to descent and conversely; (4) passenger lifts and staircases in many cases rendered unnecessary; (5) speedy and ready access for vehicles from floor to floor; (6) complete visibility ahead continuously; (7) short, easy gradients; (8) easy isolation of one or more sections of the building by automatically controlled bulkheads in the event of fire; (9) easy "by-passing" of such fire-affected sections and safe evacuation of the whole building in a few minutes, also in cases of panic; and (10) reduced cost of construction due to the elimination of the necessity for wide turning spaces, wide floor spans, and other economic constructional features. Buildings are already being erected with this system (in which the company, the Hoenig Building System, Ltd., are acting as consultant engineers) in Leeds, Belfast and Hull, while plans are being laid for a building in Central London.

A Dumping Tractor.

Interest is being shown in an entirely new machine displayed by Messrs. E. Boydell and Co., Ltd., on Stand R. 279. Known as the Muir-Hill 1 yd. dumper, it is only in the design of the body that this machine resembles the popular 2 yd. type. The 1 yd. dumper has been introduced to meet the needs of builders engaged in housing schemes, and whilst not intended to emulate the soft ground performance of other of the firm's dumpers, it is claimed that this new machine will negotiate the roughest of hard ground without difficulty. As a light runabout dumping tractor, the speed and ease of control should commend the 1 yd, dumper to a very wide circle. The overall height of the body being only 4 ft. 5½ in., no difficulty will be experienced in hand loading, and the small turning circle and wide visibility from the driving seat make the machine ideal for use in confined spaces. Simplicity has been aimed at throughout the construction, and maintenance should, therefore, prove a simple matter. Running costs are extremely low, and as the specification complies with the requirements of the Ministry of Transport, the machine may, therefore, be licensed as a road vehicle. In addition to its usefulness in building contracts, it would appear that this new development will supply a long-felt want as a general purpose vehicle in inter-works transport.



THE MUIR-HILL 1-YARD DUMPER.

The King's Visit.

Messrs. Sidney Flavel and Co., Ltd., inform us that H.M. the King honoured them by spending some time on their stand during his tour of the Building Exhibition on September 17. His Majesty, we learn, was particularly interested in the "Metro" coke fire —a model of which was chosen for the late King's Jubilee House—and asked several questions concerning its management. His Majesty expressed surprise that coke could be made to burn so freely and brightly. The "Metro-Log" Gas Fire—a realistic imitation of burning logs—also attracted the King's attention.

Messrs. Flavel point out, as a matter of interest, that on several occasions during the company's long history—from 1777—they have been honoured by the interest of Royalty in their products. The King—then Prince of Wales—paid them a similar honour at the British Industries Fair, 1935.

The Gas Companies' Exhibits.

The largest photograph in the Exhibition, measuring 10 ft. by 8 ft., is on one of the gas stands. Its significance lies in its subject, which shows a large housing estate of over 2,500 houses and flats, where gas is used for cooking, heating, water heating and refrigeration. The same stand has a backcloth which is designed to impress upon the builder the need to instal as complete a gas carcase as possible during the construction of the house. The cost of extending gas supplied after decorations have been completed has prevented many would-be users from installing extra appliances, and gas is, of course, as indispensable to the modern house or flat as the bath. An interesting exhibit is the actual construction of the "Nautilus" gas-fire flue, which is shown in detail. These flues are cheap to construct and occupy very little space.

Refrigeration by gas, still a source of wonderment to many, is well represented. Finished models are on view and working units by themselves, showing the small gas flame which is required to produce silent refrigeration. A number of stands, not entirely given over to the gas industry, also show neat methods of incorporating gas refrigerators in built-in kitchen equipment and fixing them under draining-boards. Finally, that plentiful by-product of the gas industry—coke—is well to the fore. Passers-by can see a grading unit and observe how a varied assortment of grades is split up into consistent sizes. A gas-ignited coke grate burns on the stand, being useful as well as ornamental at this time of year.

A Draught Excluder.

Metal Mouldings, Ltd., show (Stand 77, Gallery) the Monarch draught excluder, which consists of a specially designed bronze strip with a chemically treated cord securely attached. This can be applied effectively to any type of door or window, the strip being fastened by specially prepared brass rivets. The makers claim that it excludes draughts and dust, reduces noise from the street, makes windows stormproof, stops doors and windows rattling and prevents slamming. This excluder is fast gaining popularity for use around doors and windows, for the reason that it will definitely produce a draught-proof door or window, and is completely concealed when the door or window is closed, while in no way being obtrusive when the door or window is open. It is stocked in 50 ft. coils, in widths of ¾ in. and 1⅛ in., and is of British manufacture.

Exterior Surfacing at Olympia.

The new Addison-road entrance to Olympia is being constructed to the design of Mr. Joseph Emberton, F.R.I.B.A., by James Carmichael (Contractors), Ltd. Modern Surfaces, Ltd., are responsible for the exterior surfacing of this new feature of Olympia. The particular finish employed here is known as "hammered granite," which is applied *in situ* to a special backing coat, the final texture as seen on the building being obtained by hammering with sharp-toothed hammers to expose the aggregate. It is understood that this material can be produced in almost any colour, and that it is notable for its hardness, weathering and non-crazing qualities.

White Bricks.

Architects will be interested in the "Stonehenge" white sand-lime bricks shown on Stand K 194 by Stonehenge Bricks, Ltd. Good light-reflecting properties at a fraction of the cost of glazed bricks are claimed for these bricks, which have sharp arrises, square corners and a uniformly flat surface, which makes for ease in laying. Another point is the absence of efflorescence. Ready adhesion is ensured by the texture of the brick. The works are at Leighton Buzzard. Tests on the Stonehenge brick show that the compression strengths of the Nos. 1, 2 and 3 types are 4,409, 3,256 and 3,050 lb. per sq. in., which surpass the B.S.S. minimums of 2,500. 1,750 and 1,000 respectively. The standard size of the brick is 8¾ by 4¼ by 2⅝ in., but special sizes, shapes and colours can be produced to meet requirements. The absorption factor is 10 per cent.

Asbestos-Cement Products.

Illustrated on page 601 is a general view of Messrs. Turner's Asbestos Cement Company's stand (Stand 150, Row H), at the Building Exhibition, Olympia, claimed to be the largest single stand at this year's exhibition. This is planned to show the progress of asbestos-cement products in the building industry, and a comprehensive range of asbestos-cement goods from roofing slates and tiles to pressure pipes is exhibited.

A New Chimney Top.

A chimney top with novel features is shown by Konkerwind, Ltd., on Stand 75, Gallery. This chimney top replaces the last five courses of brickwork, and no chimney pot is required. Plastering, either inside or out, is unnecessary, and as the top is made of reinforced concrete it is practically everlasting. But the greatest benefit claimed for the "Konkerwind" chimney top is that it becomes unnecessary to carry the stack above the roof ridge, for which the application of the physical law relating to "nozzle action" is responsible. The tops are for single flues, but two or more may be bonded together for a series of flues.

A Steel Scaffolding Exhibit.

An interesting display is that of the London and Midland Steel Scaffolding Co., Ltd. (Stand P. 265). There are exhibits of all types of tubular structures—such as scaffolding work, grandstands, mobile towers, storage racks, sheds, trolleys, diving stages, water chutes, crush barriers, and other types of tubular framework. All fittings are guaranteed to be of British manufacture. They are of tested British steel drop forgings. Double-grip couplers, putlog couplers, putlogs split joint pins, swivel couplers, split heads and Bur-shores (all Burton's patents) complete the display.

NATIONAL HOUSING AND TOWN PLANNING COUNCIL

Conference at Harrogate.

A national housing and town planning conference will be held at Harrogate during the week-end November 27-30, under the auspices of the National Housing and Town Planning Council. It will be attended by a large number of delegates from local authorities in Great Britain, and will be addressed by Sir Kingsley Wood, the Minister of Health, and also by other prominent housing reformers and town planning experts.

The programme is briefly as follows: Friday, November 27. First session, 3.30 p.m.-4.30 p.m. in the Royal Hall. Chairman: Mr. John Bond, O.B.E., Chairman of the National Housing and Town Planning Council. Address by The Right Hon. Sir Kingsley Wood, M.P., Minister of Health.

Second session, 5 p.m.-7 p.m. in the Royal Hall. Chairman: Mr. Ernest G. Allen, F.R.I.B.A., President of the Town Planning Institute. Subjects: The Administration of the Town and Country Planning Act, 1932. The Restriction of Ribbon Development Act, 1935. Address by Mr. George L. Pepler, F.S.I., P.P.T.P.I., Chief Town Planning Inspector, Ministry of Health; 9 p.m., Civic reception in the Royal Hall, by invitation of the Mayor and Mayoress of Harrogate.

Saturday, November 28.—Third session, 10 a.m.-1 p.m. in the Royal Hall. (Civic welcome at 10 a.m. by the Mayor of Harrogate.) Fourth session, 2.30 p.m.-5 p.m. in the Royal Hall. Chairman: Mr. John Bond, O.B.E. Subjects: The General Housing Situation; The Administration of the Housing Act, 1935; The Administration of the Housing Acts, 1925 and 1930; The Administration of the Housing (Financial Provisions) Act, 1933; 5.45 p.m., joint meeting of the executive and general committees of the National Council at the Grand Hotel.

Sunday, November 29.—1.30 p.m.-4 p.m., motor coach excursion to Brimham Rocks, Fountains Abbey, and Ripon; 5.15 p.m.-6.30 p.m., lantern lecture at the Grand Hotel. Chairman: Alderman S. E. Jackson, J.P., C.C., vice-chairman of the National Housing and Town Planning Council; 8.30 p.m.-10 p.m., vocal and instrumental concert.

Full particulars can be obtained from Mr. John G. Martin, Secretary, National Housing and Town Planning Council, 41, Russell-square, London, W.C.1.

FIRE HAZARD

This work* claims to be a brief textbook upon a big subject, as the author makes clear in his preface, and accordingly we must not expect to find within its pages every item of information we think necessary. Broadly speaking, the book seems designed to serve the fire assessor and company inspector more than the builder, since the ground covered largely represents the things which are visible to the surveyor who visits a ready-built job.

It would seem, however, that there is room for a fuller explanation of building construction designed to prevent or minimise fire in respect of those many details which can so easily go wrong and become buried out of sight for ever. Among such points the question of hearth construction seems most important, especially as in the last generation the use of low-built fires has become almost universal, with a consequent increase of heat upon the suspended hearth. There appear, however, to be no notes upon the proper trimming of floors round hearths and chimney-stacks near the construction of the hearth slab. Another matter requiring attention is the construction of lintels. The importance of incombustible lintels seems greater in modern times, since the habit of arching the outer wall only with a half-brick course resting on the window or door frame has become so general. A wood lintel in such circumstances seems an unjustifiable risk of double collapse under a fire, and some notes upon this subject would have appeared suitable in such a textbook as this. The question of electric wiring is only briefly referred to, though architects and builders would have been grateful for some inside knowledge as to the things specially to watch in supervising the metal continuity of a wiring system. Recently also there has been some controversy among electricians as to the relative merits of a tube system properly earthed and one completely insulated and unearthed. Those outside the trade know little as to how this controversy has proceeded, and the main question at issue is the fire risk.

Apart from these omissions, which probably seem more important to the architect reviewer than to the average reader, who will make the fullest use of this textbook, the matter has been well collected and clearly represented, and sufficient has been said to show that good building construction and far-sighted lay-outs are important factors in the prevention of fire and the reduction of its extent when fire breaks out. Of interest is the note upon cellulose, about which many of us have had doubts in connection with fire risk. The author makes it clear that the risks are chiefly during application and manufacture, and that the thin dried skin of cellulose is a negligible hazard.

* "Common Features of the Fire Hazard." A Textbook on Common Hazards and General Hazards of Industry. By J. J. Williamson, F.C.I.I., with chapters on Lighting, Heating and Ventilation by Maurice Butler, F.C.I.I. London: Pitman. Price 6s. net.

SLATING AND TILING

In no country can more beautiful roofs be found than in England, and this is particularly true of tiled roofs on many domestic buildings. It is a pity that this cannot be said of all of them. The first requirements of all roofs on permanent buildings are that they should be, and remain, resistant to penetration for as long as the structure below them is expected to last. While not neglecting the achievement of beauty, the joint authors of this work* start with this aim as their guide. They point out that slates and tiles of good quality, if properly put on, may be expected to last for upwards of a hundred years. In a work of this sort, where a number of writers are engaged, there is the possibility of overlapping and repetition, but though it appears in four or five places, we do not regret the amount of room taken up by the statement to the effect that it is unwise to use, for a slate or tile capable of lasting a hundred years, nails that will rust through in from ten to thirty years. But galvanised slate nails, with an expectancy of life of about thirty years, are widely used, not only on cheap houses, but often on buildings of considerable importance.

In the first part of the book the authors set out clearly and in a readily understandable manner the essentials of sound and lasting construction of plain roofs covered with slates or tiles, and there is much here that will be of interest to architects and builders, and that the student should become acquainted with as a prelude to practice. Tile and slate hanging, as cover for walls, gables, and dormer cheeks, is then dealt with; and then comes an important chapter on single-lap tiling. This is followed by a chapter on special roofing, which, amongst other things, treats of curved roofs, domes, and cupolas. Stone slate roofing and wooden shingles have each a useful chapter.

Roof repairing is regarded, as it should be, as a matter of first-class importance. Five expert writers deal separately with this subject. One of them is a builder's foreman, who makes a startling statement as to the effect of the sun on exposed gable walls facing south. We consider that in the remarkable instance he quotes, where a gable wall is said to be pulled out to the extent of six inches, by reason of exposure to the heat of the sun, some other force or forces must have been engaged. His advice on the carrying out of repairs is sound and practical. He has something to say also about slaters being repeatedly called upon to remove snow from centre gutters, a matter which should be met by the provision of snow-boards, but they are not mentioned. There is an extract from C. G. Dobson's book on "Roof Tiling," dealing with roof repairs, that is instructive.

Tiles are put to many uses besides roof covering, and these are dealt with in a most interesting manner, the subject matter being accompanied by many suggestive illustrations. The final chapter deals with measuring and pricing estimates in a useful way.

The book, regarded as a whole, provides an instructive example of how much good work might be done by the collaboration of the architect and the experienced contractor and the craftsman. Each of them at the outset knows something that the others do not, and when their knowledge is pooled a work of great value emerges. That is what has happened here, and we have pleasure in recommending this book to our readers.

* "Roof Slating and Tiling." By Frank Bennett, A.R.I.B.A., and Alfred Pinion, with Contributions from other Authors. London: The Caxton Publishing Co., Ltd. Price 23s. 9d. net.

ROYAL INSTITUTE OF ARCHITECTS OF IRELAND

A special Council meeting of the Royal Institute of the Architects of Ireland was held recently, the President (Mr. H. Allberry) occupying the chair. The President read a communication from Dr. Russell relative to the appointment of assessors for a proposed competition for a new sanatorium at Ballyfermot, and the Council agreed unanimously that the matter of the selection of assessors be left in the hands of the President, with power to nominate himself if he so desired.

The Board of Architectural Education reported that the following candidates passed the final examination in June:—Messrs. J. E. Wilkinson, Michael J. Costello, A. Cunningham, T. F. Inglis, C. P. A. Kenna, C. J. Crowe, M. J. Scott, Sean G. O'Kelly, G. C. F. Henry and T. J. M'Carthy. The applications for membership were passed for posting for one month. The following, having passed the intermediate examination, were recommended for registration as students:—Messrs. J. J. Wallace, A. Greene, I. S. Barrett, W. P. Guard, J. S. Deane, C. L. Murphy, J. F. M'Cormack, R. S. Scally, A. Douglas, C. Geoghegan, and A. V. Swanton.

The following were elected Fellows:—Messrs. J. V. Downes, R. E. Evans, S. S. Kelly, D. A. Levie, and F. M'Ardle.

SPECIFICATION FOR BUILDING

This book* is expressly intended for the use of students undergoing preparation for the examinations held by the Chartered Surveyors' Institution and the City and Guilds of London Institute. That a second edition is now published indicates that it serves its purpose. The author expresses the widely held opinion that the quantity surveyor, having in the process of preparing the quantities dissected the building, and settled with the architect all points of construction not made sufficiently clear by the drawings, is the right man to compile the specification. We take the same view, for the written instructions to the builder should be such as will leave him in no doubt as to what is required. Unfortunately, however, there is a large and seemingly growing number of architects who, though unable to write a good specification themselves, do not get the surveyor to do it, nor provide properly prepared quantities. Others consider that when quantities are provided, a descriptive specification is unnecessary, and, denying the builder this aid, add, considerably to his difficulties. The present work is unambitious, but it might well be provided for the use of articled pupils as an aid to their earlier attempts at specification writing.

* "Specification for Building Works." By Wilfred L. Eversbed, F.S.I. London: Sir Isaac Pitman and Sons, Ltd. Price 5s. net.

LEGAL SECTION

DEDUCTIONS FROM WAGES: THE TRUCK ACT.

It is rather remarkable in these days when we pride ourselves on our social legislation and when disparaging remarks are current about what is termed the Victorian Age and the periods preceding it, to find an Act dating from William IV. (1831) which has proved to be of the greatest protection to the wage earners, and which, unlike many examples of modern social legislation, has proved effective in attaining its intention for a period of over 100 years. We refer to the Truck Act, 1831, which has lately been considered in two cases, one carried to the House of Lords, and the other to the Court of Appeal, and which, by the decisions of both these tribunals, has been found to afford the full intention to protect the wage-earning classes. The latest of these two cases, Kenyon *v.* Darwen Cotton Manufacturing Co., Ltd. (1936, 2, K.B. 193), recently heard by the Court of Appeal, especially illustrates the truth of the above assertions, but it also shows that legislation of this nature may operate to discourage employment, for the scheme in question in this case was a *bona-fide* effort to assist the operatives.

The facts were briefly as follows: Owing to economic depression in 1931 the company was compelled to close its mills, and early in 1932 the company, in joint consultation with their employees, whose services had been dispensed with in consequence, devised a scheme whereby capital might be raised. The scheme was expressed in two documents The first of these contained a request for allotment of 100 shares of 1s. each and an offer to pay for these shares at the rate of ¼d. per share every seven days; until the shares were fully paid up they were to be held according to the articles of association, which included a prohibition of transfer of the holdings to non-members without sanction. The second document was a request to make arrangements for the payment of the shares out of the wages earned in the company's employment at the following rates: If the wages did not exceed 30s., 10 per cent. of such wage; if over 30s. but not exceeding 38s., 12½ per cent.; if over 38s., then 15 per cent. This request was made revocable by the applicant at any time on a week's notice. The first of these two documents contained a permission to pay larger amounts if the applicant so desired. The plaintiff in this action was first taken into employment under the above agreement on September 5, 1932, and on July 25, 1933, and January 3, 1935, had made application for further shares, but subsequently she brought this action in the county court to recover the sums deducted from her wages, amounting to £9 18s. 3d., under Section 4 of the Truck Act, 1831, whilst the company counter-claimed £1 11s. 8d. as a balance due under a further allotment made by them.

During the period of the plaintiff's employment two methods had been adopted as regards the deductions; at first the actual coins representing the subscription for shares had been placed in an envelope and given to the workman, and this was at once handed back to the wages clerk; but this was later suspended, and all that was handed to the plaintiff in actual coinage was the amount of the wages less all deductions, including the contribution for shares. The county court judge had held that there had been no breach of Section 1 of the Truck Act by this contract with the plaintiff that a certain part of the wages should be applied to the purchase of the shares, and that it was a term of her contract that she should so subscribe, and that there would have been no breach of her contract had the plaintiff walked out of the room with the coins required for those contributions, returning later in the same day to repay them. But he also held that even if the contract for the contribution for the shares was null and void under the Truck Act, yet the contract was severable as regards the shares from the illegal contract, and therefore the company were entitled to succeed on their counter-claim. The Court of Appeal reversed this judgment both as regards the claim and the counter-claim.

The Truck Act, 1831, has to be construed as one with the amending Act of 1887, and the amending Act by Section 2 extends the category of workmen brought within the principal Act (1831), by reference to the Employers and Workmens Act, 1875, and substitutes the word "workman" for "artificer" in the principal Act, but the definitions of "wages" and "contract," contained in Section 25, remain unaffected. "Wages" are defined as "any money or other thing had or contracted to be paid, delivered, or given as a recompense, reward, or remuneration for any labour done, or to be done, whether within a certain time or to a certain amount, or for a time or an amount uncertain": and "contract," within the meaning and for the purposes aforesaid shall be deemed to be "any agreement, understanding, device, contrivance, collusion, or arrangement whatsoever on the subject of wages, whether written or oral, whether direct or indirect, to which the employer and workmen are parties or are assenting, or by which they are mutually bound to each other, or whereby either of them shall have endeavoured to impose an obligation on the other of them."

By Section 1, all wages have to be paid in the current coin of the realm only, and if in any contract, as above defined, the whole or any part of such wages is made payable otherwise than in coin of the realm, the contract is illegal, and null and void. By Section 2 the same result follows if the contract contains any provision directly or indirectly respecting the place where, or the manner in which, or the persons with whom, the whole or any part of the wages is to be expended. Section 3 provides that the entire amount of the wages "shall be actually paid in the current coin and not otherwise," and makes any payment in respect of wages by the delivery of goods, or otherwise than in current coin, illegal and null and void, but certain exceptions are contained in Section 23 and 24, as regards the second of these two sections slightly amended by the Act of 1887, but these are not material to the present case. Section 4 gives the workman the right to recover the whole, or so much of the wages as have not actually been paid to him in current coin.

The Court of Appeal held that the County Court judge was wrong in applying as a test of this case that there would have been no contravention of the Statute had the plaintiff taken all the coins but returned later in the same day to repay them to the company, as the test to be applied was: Were the wages actually paid in current coin of the realm? In this case the wages were not so paid, and thus the case fell within the express prohibition in Section 1, whatever method was adopted, and the contract was illegal and null and void. Lord Justice Scott put the matter thus: "If the agreement took the form of an independent and voluntary application by the workman for shares and an arrangement for weekly payments of the application money, with nothing else said, but there was an understanding that the workman would out of his wages make the weekly payment, I think the wages would be payable in shares and not in current coin and therefore in defiance of Section 1, just as much as if the hiring agreement itself said that the employer would pay the workman so much in current coin, and the balance in signed receipts for instalments of the application money"; and he referred to Section 25, and said that the former arrangement would under that Section be an "indirect device" for bringing about the same result as the latter would accomplish directly. It was further held that a breach of any one of the conditions laid down in the Act renders the whole contract null and void, but by Section 4, although the contract would thus be void, the plaintiff was given a statutory right to recover the amount of the wages not paid in current coin. The counterclaims were also dismissed, as it was held that the two agreements formed one contract, not as the County Court judge had held two severable agreements, and that contract was null and void.

Several of the decided cases were referred to, and Lord Justice Scott, without especially discussing these cases, framed his judgment upon them. We do not propose to cite them as it is sufficient for our purpose to say that the principle appears to be that any arrangement out of which the employer derives benefit, unless it falls within the express exemptions contained in the Act, will render the contract null and void; but there is one case decided by the House of Lords, Howlett *v.* Allen (1894, A.C. 383), which has been much relied upon as making an exception to the above principle. In that case the workman had entered the employer's service under an agreement that she would conform to all the rules and regulations, and one of these rules was that all employees should become members of a sick and accident club established for the benefit of the employees, the members to contribute a weekly subscription to its funds. The wages were paid to the employees less this contribution, and by the House of Lords this was held to be an obligation of the employee herself, discharged at her request by the employers, and in the sense and meaning of Sections 3 and 4 of the Truck Act, a payment to the person employed as much as if the current coin of the realm had been placed in her hands. It has to be noted that the employers themselves derived no benefit out of this transaction. This case was distinguished in the recent decision by the House of Lords in Penman *v.* Fife Coal Co., Ltd. (1936, A.C. 45; *The Builder*, August 30, 1935), as well as in the case we are now considering. The distinction between the cases is that in Hewlett's case the deduction was made to satisfy a debt due from the employee, whilst in Penman's case the deduction was made from the wages of a son to satisfy a debt due from his father to the employers themselves.

WORKMEN'S COMPENSATION: REDEMPTION OF WEEKLY PAYMENTS.

The Court of Appeal, in the recent case, Pick *v.* Paling (2 All. E.R. 1291), had to consider a point under the Workmen's Compensation Act, 1925, as to whether, when by agreement between the workman and his employers, compensation has been arranged partly on the basis of earnings, but partly on the provision of light work or other benefits, an application by the employers to redeem the weekly payments under section 13 of the Act can be entertained by the arbitrator. In this case the workman, an engine driver and farmer's labourer, in the course of his employment had sustained an injury to his right hand whereby the first two fingers had been amputated at the middle joint and the remaining fingers had become doubled into the palm of the hand. His average weekly earnings had been £2 1s. 6d., and for about eighteen months he had been paid £1 2s. 10d. on the basis of total incapacity; but ultimately an agreement had been come to that the compensation should be 14s. 7d. a week, and that work reasonably suitable should be offered for the minimum duration of eight months in the year, at the minimum wage of 2s. 6d. a day. It was also agreed that should the respondent fail to employ the workman (unless that failure was due to an act of the workman), or should the fainting or dizziness become more chronic so as to render the workman unable to work, that should be deemed "a change of circumstances" within the meaning of the Act. This agreement was dated October 31, 1933, and was being acted upon (except that the employer had provided a full year's work in place of eight months), when on January 7, 1936, the employer applied for arbitration to redeem the weekly payments. The workman had filed an answer setting out the terms of the agreement, and

also bringing to the notice of the arbitrator a change of circumstances (1) that the hand had failed to respond to treatment, and a further contraction had taken place, and (2) that he was unable to obtain other work than that provided, and had become an " odd lot " in the market. The change of circumstances was traversed by the employer. The county court judge, after hearing evidence, dismissed the application of the employer with costs and also what was deemed as the counter application of the workman, also with costs.

Before the Court of Appeal, the decision was limited to the question whether in such circumstances an application to terminate weekly payments by redemption could be entertained, and the Court found the point covered by the decision of the House of Lords in Clawley *v.* Carlton Main Colliery Company (1918, A.C. 744). That case was decided under the Act of 1906, but the material provisions of that Act remain unchanged in the Act of 1925.

The facts in the case before the House of Lords were very similar to those in the present case, and the Court of Appeal found them not distinguishable. But there are one or two points relating to procedure in such cases which may be considered. In the first place, it was argued that the workman, in his answer to the application of the employers, had asked on his own account for a review, and this laid some obligation on the county court judge to travel outside the application of the employers and not simply to dismiss their application; but the Court of Appeal held this lay outside the question brought before them, which was only an appeal by the employer against the refusal to make an order for redemption, which refusal was held proper since the application was based only on that portion of the compensation represented by the money payment of 14s. 7d. per week, whereas the Act in section 13 contemplates a final settlement on the basis of 75 per cent. of the annual value of the weekly payments, and the House of Lords had held (reversing the Court of Appeal), that the section only applies to a final settlement of all liability on the part of the employer represented by the weekly payments plus so much of the benefits or advantages agreed to as will make up the difference between the statutory liability and the agreed weekly payment. In that case the county court judge had endeavoured to obviate any injustice by preserving in his award the terms of the agreement other than the money payment, but the House of Lords held that he had no power to do this. What, then, is the proper course to adopt in such cases? The answer to this question is given in a passage of the judgment of Lord Wrenbury in Clawley's case, and acted upon by the Court of Appeal in the present case. After stating that the application to redeem could not be entertained for the reasons given above, the Lord of Appeal continued : " But it does not follow that the employer is excluded from the statutory benefit " (the right to redeem). " The existence of the agreement is no impediment to resort to the provisions of the Act to ascertain what is the statutory weekly payment and to an application for redemption of all liability therefor. This, I think, may take the form either for an application for review under Schedule I (16) " (now section 11 of the Act of 1925) " or for an application to fix the statutory weekly payment on the footing that there is no such agreement." There are some observations in that judgment that only the workman can apply for a review, but this is no longer the case under section 11 of the Act of 1925.

George IV's Fishing Temple, Virginia Water.

Alterations are being carried out at Virginia Water in Windsor Great Park. The lake is overlooked by the King's apartments at Fort Belvedere, his country home near Sunningdale. The view of the forest from the windows has been interrupted by a number of buildings on the lake, which are now being removed. Among these is the Fishing Temple built by George IV., demolition of which has begun.

THE ARCHITECT AND THE BUILDING CONTRACT

By W. T. CRESWELL, K.C.

In some quarters it would seem at times to be overlooked that the building contract is made between employer and building contractor.

Such special powers and responsibilities does the building contract directly and by implication confer on the architect himself, and from time immemorial custom and usage have recognised his authority in such a wide sense as to make it possible for him to arrogate to himself such powers as seem, during his supervision of the work, temporarily to set aside the employer almost entirely.

It is very rare that an architect is given unlimited powers by the terms of the building contract, and he is at all times bound to have regard to those terms in determining matters which come within the scope of his expressed and implied authority; otherwise, should an *impasse* develop, the employer has a legal right to terminate the relations between himself and the architect by formally dismissing the architect from his service, and, in the limit, bring against him an action for negligence.

Primarily, an architect's duties are to design buildings and other works, superintend their erection to conclusion, and certify payment therefor; that is to say, when the work is completed to his satisfaction in conformity with the building contract.

The 1931 Form of Building Contract gives very extensive powers to the architect in respect to the approval or rejection of work done under the building contract, and the nomination of specialists, merchants and subcontractors; also in respect to the securing of payment by these last should the general contractor fail to pay them. Moreover, by custom, all prime cost items and provisional amounts are under the control of the architect and not under that of the building contractor. But only in very rare circumstances is it found that a building contract gives the architect power to vary, waive or dispense with the conditions of the building contract without first obtaining the authority of the employer. He has no discretionary power to vary the whole scheme of the building enterprise, or order or allow the substitution of work or materials for those specified in order to produce a better result, without first obtaining the agreement of both parties to the contract. One of the most common results of an architect's failure to keep these rules in mind is to give opportunity to the contractor to make a claim for " extras." This type of claim, together with the claims made by employers for delay in the contractor's completion of the work form the basis of the bulk of building disputes. What has been stated applies to the architect also in his functions under sub-contracts, in which he has to consider the rights and liabilities of both the employer and the general contractor.

An architect has no right to accept any tender from a sub-contractor unless the general contract enables him to do so, except the sanction of the employer has also been obtained thereto. Approved forms of building sub-contracts usually embody the terms of the principal building contract. Since the sub-contractor must look for payment to the general contractor, the financial interests of both of them must also be kept in mind in the granting of certificates for sub-contract work. It is wise on the part of the architect to obtain more than one tender, rather than that he should recommend the employer's and the general contractor's acceptance of one only.

Under section 266 of the Local Government Act, 1933, contracts of a local authority must be made in accordance with its standing orders; and in respect to contracts for the execution of works the standing orders must require that notice of the local authority's intention to enter into the contract must be published and *tenders* invited, and they must regulate the manner in which such notice shall be published and such tenders invited.

An architect should bear in mind that the power to dismiss him instantly rests at all times in the hands of his employer to be applied if the architect is guilty of legal negligence. On the other hand, if the architect throws up his employment without just cause he is liable for damages for breach of his contract of service.

BOOK REVIEWS

An Introduction to Acoustics of Buildings. By E. G. Richardson. Arnold. 3s. 6d. net.

This little book describes in very simple manner the principles underlying architectural acoustics, and serves as an introduction to the subject which should be of value to the architectural student who has not made a study of physical science. Simple rules for acoustic analyses are given, together with some notes on the more common acoustical materials and the methods of applying them. The last chapter contains brief hints on acoustic design, a knowledge of which would impart to architects that acoustic sense which should do much to eliminate acoustic faults and engender an intelligent appreciation of the work of the specialist.

Elementary Building Geometry. By G. A. Hanby, M.I.Struct.E. London : Edward Arnold & Co. Price 3s. net.

The student of building construction specialising in a branch of geometry particularly suitable to his calling will find this work a valuable aid. The author has that clarity of thought and diction that is so desirable in those endeavouring to impart their knowledge by means of the written word. Many writers fail, or are not so successful in this, not by reason of any want of knowledge of their subject, but because they do not sufficiently appreciate the limitations and difficulties of those standing in need of their instruction. It is in the presentation of his subject, and its application to the needs of the student of building construction desirous of sitting for examination, that the author is so successful But the work has also a wider practical use, in that the builder or leading craftsman, grown a little "rusty" in regard to geometry, may, on occasion, consult it with advantage, and find what he wants with readiness, the illustrations and diagrams used being those appertaining to building and of a familiar form.

An Introduction to the Theory of Elasticity for Engineers and Physicists. By R. V. Southwell, M.A., F.R.S., M.I.Mech.E., F.R.Ae.S. Oxford University Press. Price 30s.

This excellent book will prove extremely useful to those who are studying strength of materials. It is intended for those taking an honours course in that subject and also as an introduction to more advanced work, and for these purposes it is one of the best works available.

Whilst those matters so essential for the academic training of a structural engineer are in no way neglected, the whole subject is covered, as of course it should be, for the student to acquire a proper understanding of what is, after all, the basis of nearly all designing.

The book contains many examples taken from examination papers in the Mechanical Sciences Tripos of Cambridge and the Oxford Final Examination in Engineering Science, and many of these are fully worked out to demonstrate the application of the theoretical work.

The more simple yet important matters, such as deflection of beams, theorem of three moments, etc., which are to be found in the usual text-books, are dealt with in a very clear manner, but Professor Southwell goes on to prepare the reader for the most advanced books on the theory of elasticity.

This book belongs to the class which plays so important a part in the training of an engineer and in helping him to understand his subject fully whilst he is taking a university degree course. It is well produced.

INQUIRY BUREAU

QUESTIONS.

Terms of Lease.

SIR,—Under a lease there is a covenant under which the lessee undertakes responsibility for the structure, "other than from causes due to sudden settlements or structural defects." Damage to decorations has occurred through defects in a lead gutter, which it is contended is a structural defect, and therefore an obligation of the lessor to rectify. I should be glad to know whether this is considered a correct reading of the lease. SURVEYOR.

Fixing of Steelwork.

SIR,—I should be glad of advice as to whether in a small job it is considered more economical to have the structural steelwork fixed by the supplying firm, or by the local contractor, the work being some forty miles away from London. I may say that the local contractor is well capable of fixing, though I am unaware of the relative values of the work so fixed. COUNTRY ARCHITECT.

Defects in a House.

SIR,—Something under six months after purchase of a house, serious defects have occurred in the external rendering, calling for immediate repair, owing to damp percolating to the interior walls. An independent witness, a qualified surveyor, has testified to the defects being due to faulty workmanship. The vendor, who put the building out to contract, has been approached by the purchaser (that is myself), but refutes all liability. Before incurring expense of litigation, I would be very glad of an opinion as to with whom the liability rests. A. W. W.

Jobbing Builders' Profit.

SIR,—I have been in the jobbing trade all my life. Some controversy has arisen recently in this district as to what is a fair profit for a jobbing builder to charge. I would very much like your opinion as to what percentage of gross profit a suburban jobbing builder should show on a year's turnover, and what part, in your opinion, of that gross profit should represent overheads in the way of normal working expenses.

READER.

[In answer to this question, a correspondent writes as follows:—

"There is no well-established rule as to what percentage gross profit should be chargeable on turnover, nor as to the relative allowable cost of overheads. From a gross turnover of £2,000 per year, some jobbing builders would extract a net income of £300 per year, whereas others would require to turn over twice as much to achieve as large a gain. Much depends on the class of business done, the neighbourhood in which it is done, and the competitive conditions.

"Your correspondent may appreciate that overhead charges cannot be accurately related to turnover as a percentage. For instance, the rent of his premises, rates, heating, lighting, water, telephone and office wages may represent an irreducible annual cost that must be borne in good and in bad times. He cannot increase the amount of his customers' bills in bad times by reason of his overheads being, when reckoned as a percentage on turnover, relatively higher. On the contrary, he may by force of keener competition be compelled to reduce his charges.

"Speaking generally, and with reserve, I should say that on individual accounts below £1 the profit (gross) should be about 6s. in the £. On accounts of from £5 to £20, 25 per cent. On accounts of about £100, 20 per cent. Over that, 20 per cent. on the first £100 and 15 per cent. thereafter.

"There are, however, occasions on which no profit at all can be charged, and others on which percentage profits may be doubled. There is room for discretion."]

Damp Foundations.

SIR,—I should be grateful if you could advise me on the best action I could take to prevent water coming through the foundation of my house. I have had considerable difficulty in this matter after rainfall, having had as much as 6 in. of water right over the foundation. The outside walls have been rendered from the footings to the damp-course. The inside walls have also been treated in like manner, and the whole of the foundation covered approximately to a depth of 1½ in. with a strong mixture of cement and sand, impregnated with waterproofing solution. Water still finds its way in between the lower bricks of the sleeper walls, with the result that the foundation is never dry, and the warmth of the house is steadily drawing dampness up into the floorings. It has been suggested to me that a vertical slate damp-course from the foundation to approximately half up the sleeper walls, with a horizontal damp-course of like material or of four-ply bitumen running through the sleeper walls, should prove effective. Would you care to pass an opinion on this, or can you offer any alternative suggestion? A. B.

ANSWERS.

Dilapidations.

[ANSWERS TO "LEASEHOLDER," SEPTEMBER 18.]

SIR,—The answer to the question depends largely upon the wording of the covenants in the lease. Generally these require the lessee to maintain the property in good and tenantable repair, sometimes specifying the periods for redecorations, and perhaps the number of coats of paint, etc. The lessee must then hand over the property in accordance with these covenants, at the termination of his lease.

Prior to this, it is usual for the lessor to serve on the lessee a schedule of dilapidations setting down in detail the work he considers should be done to conform. This need not be accepted if the lessee can show it to be unreasonably severe, or in excess of the covenant, or that he has improved the property in respects under which the forthcoming lessee or the lessor will benefit. He then has the option of submitting for acceptance an alternative schedule, and the matter may be settled by agreeing a lump sum to be paid in full satisfaction, or by carrying out such works as can be shown to conform with his covenant. DILAPIDATIONS.

SIR,—A lessee is always entitled to carry out the repairs himself; indeed, that is his covenant. He may, however, negotiate with, and it is usually advisable for him to agree with, the lessor to pay an agreed amount for the repairs, and by so doing free himself of all further trouble and liability therefor. Should he determine to carry out the repairs himself, he must be allowed a reasonable time in which to execute them, after he has received notice of the same. If that time is not exceeded he is not liable for rent.

LEX.

Bath Stone.

[ANSWERS TO "DESIGNER," SEPTEMBER 18.]

SIR,—The stains are doubtless chemical stains driven out by the moisture in fixing. The constituent is probably iron, and there is no way of cleansing other than by covering up with surface treatment. As a rule, however, the marking is not unpleasantly disfiguring, and unless a strong dislike is taken to it the matter might be left to settle itself.

TREATMENT.

SIR,—The discoloration of the stone is due to chemical reaction brought about by the heat, this being due to the stone being unsuitable to exposure to heat. If the discoloration is throughout the stone, there is little likelihood of any remedy being successful. If the stains are mostly on the surface, a good scrubbing with hot water, followed by well rubbing in a thin paste made from water and some well-powdered Bath stone, might be successful. W. E. W.

SIR,—It occurs to me that the staining referred to is not a sign of defect in the stone but the result of bedding the stone to a backing of brickwork or concrete. The same brownish stains can be seen on the stone of many comparatively modern buildings where the proper preventive measures have not been applied. Nothing can be done to remove the stains or to restore the natural colour of the stone. It is now an established fact that the staining of structural stone is caused by the penetration of the salts and iron compounds from the brickwork, mortar and concrete backing to the stone face.

To prevent staining thus caused the only effective practice is to paint the back and beds of the stone with a special composition. No doubt the Bath and Portland Stone Company would supply "Designer" with the name of the company who manufacture the composition referred to, or he could have it by communicating with the writer.

J. D. KAY.

PROTECTION OF BUILDINGS AGAINST GAS

No doubt many small builders in various parts of the country will be asked to carry out the protection of buildings or rooms against gas in case of air raids. The Home Office has just issued the first edition of a handbook in which there is a special section on this question. An appendix deals with the selection of rooms for gas protection, and advises that in each house a room or rooms should be prepared to prevent the entry of gas, so that it may be safely occupied during a raid in which gas is used. The room to be protected should therefore be selected on the following principles:—

(1) A cellar or basement is best, always provided that there is no risk of flooding and that alternative means of exit exist;
(2) If there is no basement, choose a room on the ground floor;
(3) The windows of the rooms should be small, and, if possible, not in an exposed position. If they face soft ground, the blast of an exploding bomb may be more smothered than if they face a paved or metalled surface. The glass will in any case be liable to be broken by the explosion of high-explosive bombs, even at a considerable distance, and some other covering will have to be fastened over the window frame;
(4) Where possible, the room should be on the side of the house least exposed to the prevailing wind. Wind pressure will assist the entry of gas through small crevices and ill-fitting window frames.

The methods of protecting buildings or rooms against gas, that is to say, of making them as gas-tight as possible, are fairly simple. Reliance must not be placed on glass windows. If strong paper is pasted over the glass it will prevent collapse in case the glass is cracked. If the window has shutters, these should be closed. Otherwise, if planking is available, it is advisable to board up the windows on the outside as an additional protection against the effects of high explosive. The inside of the window should be covered with materials such as oilcloth, linoleum, carpet, or blanket. In cases where illumination is important, translucent materials, such as non-inflammable celluloid, or cellophane, may be used. These should be fastened round the edges of the window-frame by strips of wood or cardboard. Linen or cotton sheets, which have been backed by pasting strong paper on one side, is also good.

A blanket or covering of one of the suggested materials should also be fastened over the outside of the door-frame, leaving a flap which can be turned up to allow entrance. If there is a large crevice under the door, a thin strip of wood should be nailed to the floor to form a small step against which the door will fit tightly. The fireplace and any other opening through which air can enter will require to be closed by wood, cardboard, or similar material. Even the keyhole should be stopped up. In many houses it will be found that the windows and doors are so ill-fitting that it is necessary to paste newspaper over the cracks to render them air-tight. A mush of newspapers and water is useful for stopping up large cracks.

THE BUILDING TRADE

MORE ABOUT RECURRING DEFECTS—XIII

By J. R. TAYLOR

DOMESTIC WATER SUPPLIES

(*Continued*).

Complaints in regard to inefficiency are made much more frequently in reference to the hot- than to the cold-water supplies; and to some extent this is due to the fact that water supply companies generally require that the cold-water installation shall comply with certain regulations. Generally speaking, these regulations aim more at the avoidance of waste and the prevention of pollution than anything else; but they do tend in the direction of all-round efficiency. Of late years there has been a stiffening of regulations, and a measure of joint agreement as to insistence on the use of better quality fittings. Defects on small domestic hot-water systems often originate in the installation of inferior fittings, in inferior workmanship and poor design, and frequently in mishandling by the user. This last is the most difficult to overcome, for while an architect, a builder, a plumber or a fitter will profit by experience, it does not seem to be possible to educate the great body of users. Consequently, all that can be done is to aim at a sturdy simplicity that will render the fitments and the system as a whole more or less fool-proof. There are, however, some hints as to care and maintenance that might with benefit be passed on to the user, who is generally uninformed on matters which to the experienced fitter appear commonplace. The user should, for instance, be urged to keep the heat-raising appliance properly clean—that is to say, as nearly free from all collected soot or dirt in the flues and other unseen parts as when it was first installed. The facility with which this thorough cleaning can be effected should largely govern the choice of the purchaser. In this respect, ranges with self-contained flues generally compare favourably with those to which flues have to be formed in brickwork. But brick flues, properly formed in exact accordance with manufacturers' instructions, have, for certain types of ranges, advantages to which we may refer later.

Small Heating and Hot-water Systems.

Some of the matters to which reference has been made above have a bearing on both large and small hot-water-raising systems; and they may be better treated as they arise than by collecting and cataloguing them. We shall confine our remarks to the smaller or domestic systems, and more particularly to those employing solid fuels, not by reason of any lack of appreciation of the merits of other systems, but because the coal- or coke-consuming system of raising hot water is, despite the great advances made in other directions, the most largely used. We feel compelled to add, however, that for the small house the addition of a gas or electrical appliance, that may supplement or take over the work when so desired, is very useful. Taking first the house entirely dependent for its hot-water supplies on the boiler of a kitchen range, we may consider defects arising out of want of knowledge or care in the fixing. Where the position of the boiler relative to the fire is to some extent a matter of choice, a common fault is that of making its flue too large, with the result that the back of the boiler does not collect all the heat it might from the hot gases passing up behind it. It occasionally happens that this results from the fixer endeavouring to conform to the size of damper frame supplied with the range, but more often he makes the flue larger than he should, because he knows that it is likely to be partially choked by refuse not properly raked out when the fire is laid. The depth of the boiler flue from back to front should never, in the case of an ordinary kitchen range, exceed 2 in., and if the user could be depended upon, a lesser depth would give increased efficiency.

In no case should it be possible for air to reach the chimney or flues other than through (or in the case of an open fire, over) the fire-box. Where a range is fitted in a breast, and the flues have to be formed in the brickwork, it is not a very easy matter to ensure that they will remain reasonably airtight, for the iron range will expand and contract as the result of variations in temperature. In respect to this, "self-setting" ranges with contained flues collected to one exit have an advantage. It sometimes happens that these ranges are set in old openings (or even in new ones if the fixer is not informed) in such a way that the iron flue pipe discharges into a roomy gathering instead of above the throat of the chimney. The iron flue pipe should be carried well up into the brick flue, and the joint between should be sealed off. This, in the case of fixing a new range in an old opening, may involve cutting out a hole above the arch in order to introduce a sealing plate and make a secure join, but because of the improvement of the draught it is well worth while.

Care of Small Independent Boilers.

As was mentioned earlier, it is possible for domestic purposes to instal a range that will both cook and heat, and raise hot water for consumption and also for central heating; and, of course, the water used for central heating can be "turned off," that is, prevented from reaching the boiler and circulating when, as in summer, the heat from it is not required. In many cases it is better to instal an independent boiler for the central heating, which can be put out of commission during the summer months. And here we come to a very important consideration, for it is not widely recognised that, if neglected, the life of this apparatus may be more rapidly shortened by disuse than by use; not, of course, under all conditions, but still under conditions that cannot be said to be abnormal. At all times, with a view to preventing the formation of clinker and hard deposits, the fire-box and the flues of a boiler should be kept very clean, and this is particularly necessary when a boiler is about to go out of use for a time. All loose parts should be removed, and the surfaces that are ordinarily rubbing or in contact should be cleaned. Furnace bars should be taken out and cleaned, and be black-leaded. The pockets into which the ends of the bars fit should be cleaned out, for it is important that there should be room for expansion, and if rust forms or dirt hardens between the ends of the bars, damage may be done when the fire is re-lighted. When all has been cleaned, furnace doors and flue covers should be left open for the air to circulate and carry off moisture. Because of the great damage that can be done by moisture arising from condensation it is important that the place in which the boiler is installed should ordinarily be dry and well ventilated. Boilers are sometimes placed in cellars that are damp and lack ventilation, and the coke fuel, being housed in the same place, collects moisture. At the end of spring, when heating is for a few months discontinued, it is not unusual to find that the water is entirely withdrawn from the system. Sometimes it is at once replaced with fresh water to keep the joints tight, but the refilling may be postponed until a few days before the system is again put into service. In the latter case some of the joints may give trouble. But the point we wish to make is that this replenishment may, and in a hard-water district will, materially reduce the efficiency and shorten the life of the system. And because the thickest deposit of lime will occur where the waterways are in contact with the fire, and because scale will to an extent prevent the heat from reaching the water and will cause it to burn the iron, the owner is in the unfortunate position of paying more for his fuel, with the resultant damage to, and in time destruction of, his apparatus.

Connection of Flues.

We have already mentioned the desirability of making a proper connection of a self-setting range to the brick flue of an old opening. It is just as important that when an independent boiler is fixed, the usual iron pipe should be connected to the brick or fireclay flue in a proper manner. If the flue to which the connection is made be an old one, any other opening than that receiving the iron flue pipe (or accommodating a soot door) should be effectually and permanently sealed off. The joint should be airtight and the iron pipe should not protrude into the brick flue. If the iron flue pipe be continued up for its entire length as a new flue, it should not be placed on the external face of a wall without protection by suitable insulating material, and its outlet should be well above ridge level. In fact, an external iron flue pipe can add so much to the fuel consumption and be the occasion of so many other troubles that it would be truer economy to build in brick in many cases. Where this cannot be done, consideration should be given to asbestos-cement pipes, though they also have their drawbacks.

Fire Risks.

When a central heating boiler is installed in a house of some size, and it is so placed as to be served by an existing flue, it is important to consider the increase of fire risks. Generally, chimney breasts are plugged for skirtings and picture rails, and in old houses beams may enter and be supported by them. Frequently the pargetting will have fallen away and much of the mortar of the brickwork have perished. Such conditions have been the occasion of so many fires that it is surprising that authoritative action has not been taken to prevent the recurrence of similar conditions. Where domestic buildings are taken over by H.M. Office of Works for use as offices, and a central heating system is installed, it is usual to open up and reline the flue with firebrick to a height of some 10 ft., more or less. Generally, a fireclay flue pipe of 6 in. internal diameter would serve such an apparatus efficiently, and this could be housed in a 9-in. by 9-in. brick flue more cheaply than by cutting away for a lining of fire-brick. A soot pocket should be formed below the connection, giving access for sweeping, which should be carried out regularly at the end of the period of use, and not at the beginning of a period of reuse. On going in heating chambers in country places the writer has sometimes found evidence that green wood has been dried out on the top of the boiler. Apart altogether from the risk of fire, this practice is to be severely condemned, or any other that may raise steam elsewhere than in the boiler itself. A boiler house should be dry, be well lighted, ventilated, and drained, and be capable of being kept scrupulously clean.

(*To be continued.*)

The Paint Marketing Council.

The opinion that the Paint Marketing Council did wisely in devoting its funds to Press advertising was expressed by Mr. S. Romilly Hall, chairman of the Paint Marketing Council, in a speech at the annual conference of the National Federation of Master Painters at Hull on September 17. "There are other ways of advertising, I know," Mr. Hall added, "but I cannot think that any are so efficacious as Press advertising." Mr. Hall paid a tribute to the Press for the way in which it had drawn attention to the hardships of "seasonal" unemployment among painters and decorators. He quoted figures showing how the rate of unemployment in the painting and decorating trade had shown a progressive drop between the years 1933 and 1936. "In 1933, during the decorating season," said Mr. Hall, "the percentage of painters unemployed was 19.1; in 1934 it was 12.7; in 1935, 10.7, and this year 8.15. These figures speak for themselves."

HOUSING PROGRESS

SIR KINGSLEY WOOD, the Minister of Health, speaking to representatives of the Bristol City Council at the Council House, Bristol, on Friday, September 18, said that he estimated that some 350,000 new houses were still required to complete the present slum clearance schemes and to abate overcrowding. Already some 500,000 slum dwellers had been removed to new and decent homes, and new houses were being completed at the rate of some 6,500 a month. Over 420 local authorities had already submitted proposals to deal with overcrowding in their districts. The overcrowding programme would require a considerable percentage of the larger type of house, because the recent survey had shown that the average overcrowded family was larger than the normal family.

There were still three great tasks in relation to housing in which much progress had already been made, but their completion had still to be accomplished. The vigorous attack which was in progress against the slums must be continued. We had to get into full swing the campaign to abate overcrowding. There was the building of new and better houses for those who were, unhappily, still living in bad and indeed intolerable conditions.

The Five-year Plan.

The five-year plan for slum clearance, outside the six largest towns, would be completed in the time specified. In a number of areas the programmes had been completed. Already some 500,000 slum dwellers had removed to new and decent homes and there were more going at the rate of about 26,000 every month.

It was difficult to translate the above figures into the language of human values, but they did mean that when our present slum clearance programme was completed and the new houses erected, well over a million persons would have been housed in decent conditions. There they would be able to live and bring up their children to a greater inheritance of health and happiness than social reformers of the past ever thought was practical in such a comparatively short period.

Overcrowding.

The state of overcrowding in this country was a matter with which we could not be content. In the terms of the statutory standard there were 340,000 overcrowded houses in England and Wales. How many new houses must be built to deal with this situation? The answer to that question could not as yet be given with accuracy. Overcrowding could, of course, be abated in other ways than by building new houses. It might well be that some 200,000 new houses were necessary. Local authorities would have to solve the problem step by step, reviewing the position in their areas as each step in advance was taken, and it was not only a question of the local authority as builder, but also of private enterprise as builder. Local authorities were now furnishing the Ministry of Health with their estimates—tentative proposals had already been received from 420 authorities, and more were coming in day by day.

Before Parliament could be reasonably asked to consider again the present overcrowding standard, which he hoped it would soon be possible to do, it was not an unreasonable computation to say that some 350,000 new houses had yet to be built—150,000 to complete the slum clearance scheme, and 200,000 houses to abate overcrowding. The erection of these houses within a reasonable period was well within the capacity of the local authorities and of the industry.

Cost of Houses.

Cost, particularly from the point of view of low rents, was always an important factor. He was glad to say that whilst increases in the cost of local authority dwellings had been noted in certain areas, it was not general. This matter had to be kept under constant review, particularly because the overcrowding programme would require a considerable percentage of the larger type of house. The reasonable cost of the larger house was a proper cost from the point of view of good housing, and it must be faced, and without derogation from the proper rehousing standard of the local authorities, which should not be confused with the overcrowding standard, which was a penal standerd.

Good Design.

We had now got down in many respects into the "hard core" of bad housing conditions and were within sight of rooting much of it out for good and all Our endeavour must always be to put in their place happy homes of decent size, sound material and good design, and at the proper rents. The great asset of good design—sometimes termed "architectural design," or by the man in the street "charm" or "pleasant homeliness"—was with proper planning equally obtainable alike for the dwellings of the workers as of the "better-to-do." Unless proper steps were taken it was equally elusive in both cases. We had to pay more attention to this important matter.

NATIONAL FEDERATION OF MASTER PAINTERS AND DECORATORS

ANNUAL DINNER AT HULL.

THE annual dinner of the National Federation of Master Painters and Decorators of England and Wales was held last week at the Royal Station Hotel, Hull. Mr. David Green, the President, occupied the chair. Among those present were the Lord Mayor and Lady Mayoress, the Sheriff and Sheriff's Lady (Mr. and Mrs. J. Cyril Townsley), Mr. Kenneth Mackintosh (president, National Federation of Master Painters in Scotland), Mr. H. S. Manning, Councillor J. A. Dew (president, National Federation of Paint, Colour and Varnish Manufacturers), Mr. F. Robinson (vice-president), Mr. S. Romilly Hall (chairman, Paint Marketing Council), and many others.

Councillor Richardson, proposing the toast of "The City," said that they as painters were closely in touch with Hull, which supplied them with enormous quantities of paint.

Responding, the Lord Mayor stressed the importance of advertising by Hull paint manufacturers. Hull, he said, owed much of its proud position to the paint trade.

Mr. Mackintosh, proposing the toast of "The National Federation," said members of the Federation did not wish to be judged on the amount of work they did, or the number of men they employed, but rather by demonstrating to the public the genuineness of their workmanship and craftsmanship. It was their endeavour and ambition to stimulate the love of colour and workmanship in their craft.

The President, in reply, claimed that theirs was a key industry, and urged that every endeavour should be made to brighten up the country in preparation for "the most popular coronation that this England had every known."

Mr. Manning proposed "Kindred Associations" in a witty speech.

Councillor Daw, responding, said that the trade association movement was now definitely established in this country. They were recognised as the mouthpiece of industry, and it was to the trade association that the Government came for consultation on legislation affecting each industry.

Guests were welcomed by the vice-president, and Mr. Romilly Hall, in reply, spoke of the work of the Marketing Council. "I think that, thanks to the Council's efforts, there is more brightness everywhere," he said. "There is still much to be done in this country by a painter's standard, but at least you will agree that there is more colour about. Post offices are cheerier places, railway stations are gayer, seaside resorts more cheerful, private houses are showing glowing colours to the world."

Mr. T. Sheppard also replied.

EXHIBITION OF APPRENTICES' WORK.

One of the chief aims of the Federation is the education of apprentices, and soon after the formation of the Federation there came into being the Joint Education Committee, the principal function of which has been to provide the facilities necessary for the training of youths in the industry. Each year an exhibition of the work of the apprentices is held in conjunction with the annual conference. This year Hull is the rendezvous, and last week the Sheriff of Hull (Mr. J. Cyril Townsley) declared open the exhibition in the Mortimer Museum, Carr-lane.

The chair was occupied by Mr. H. S. Manning, of Bedford, chairman of the National Joint Education Committee of the Federation. There were also present: Mr. D. Green (President of the Federation), Mr. H. Hall (chairman of the Hull Master Painters' and Decorators' Federation), Mr. W. Mellor (national secretary), Mr. R. C. Moore (director of education), Mr. T. Sheppard (director of Hull museums), Mr. S. I. Heiman (principal, Hull College of Arts and Crafts), Mr. V. Galloway (director, Ferens Art Gallery), and others.

Declaring the exhibition open, the Sheriff said no trade organisation could justify its existence if it merely served its own day. It must do more than that, and the master painters and decorators were serving the future by the great interest they were taking in the training of young men to be really first-class craftsmen. Given equality of opportunity, the young men of to-day were fully the equal of the boys of 25 years ago. The exhibition embraced about 6,000 exhibits from over 1,000 apprentices and they revealed a very high standard of workmanship, which augured well for the craftsmanship of the industry in the future He hoped the citizens would take the opportunity of visiting the exhibition and of inspecting the really good work displayed.

Mr. D. Green proposed a vote of thanks to the sheriff, which was seconded by Mr. H. Hall.

THE FOULING OF SOIL PIPES

Mr. George W. Grey, F.R.I.B.A., F.S.I., of Hong Kong, in sending us the accompanying photograph, writes as follows: "This is a portion of a 4-in. coated cast-iron vertical soil pipe, cut about 12 ft. from ground, with five stories above, carrying 20 pedestal closets and four urinal stalls, and, as far as can be gathered, the period during which the soil pipes have been in use is 40 years. The original flush was two gallons, being changed about ten years ago to three gallons. The water is obtained from a shallow well, being pumped daily to the top of the building, and is brackish, the building being on ground reclaimed from the sea. The fouling is hard, except that recently deposited and directly surrounding the bore. The assumption is that the accumulation of foul matter came from defective automatic flushing cisterns to urinals, that w.c.s were used as urinals and were not flushed when used, and that the supply of water to the tank occasionally failed."

NEW BUILDINGS IN LONDON

BARNES.—ALMSHOUSES.—The T.C. has passed plans for three bungalow-type almshouses in Christchurch-road, by Mr. R. B. Rowell, A.R.I.B.A., 5, The Triangle, Upper Richmond-road, S.W.14, for the trustees of the Mortlake Parochial Charities. Tenders are being invited.

BARNES.—WAREHOUSE.—The T.C. has approved plans by Mr. R. B. Rowell, A.R.I.B.A., 5, The Triangle, Upper Richmond-road, S.W.14, for a new public garage and warehouse in Liffords-place for Mr. P. Vine. The steelwork is being supplied by Messrs. T. C. Jones and Co., Ltd.

BARNES.—BUILDING.—Regarding the 146 flats and two shops to be erected on the Chertsey-road site, the Housing Committee of the T.C. has reported that bills of quantities are in the hands of the quantity surveyor.—The Maternity and Child Welfare Committee has approved the plan for the new clinic it is proposed to erect at Worple House.

BETHNAL GREEN.—DWELLINGS. — Plans have been prepared for a block of working-class dwellings in Cheshire-street, N. The architects are Messrs. Montague Evans and Son, 292, High Holborn, W.C.1.

BLACKHEATH. — EXTENSIONS. — Messrs. Whitbread and Co., Ltd., brewers, Chiswell-street, E.C.1, are to make alterations and extensions to the "Horse and Groom" public-house at Blackheath-hill. No contracts placed.

BOW.—GARAGE.—Messrs. E. W. Rudd, Ltd., 190, Bow Common-lane, E.3, have had plans prepared for a garage and works in Bow-road, E. The contract has been placed with Messrs. H. H. Hollingsworth and Son, 200, Peckham High-street, S.E.15, whilst the steelwork will be erected by Messrs. A. and J. Main and Co., Ltd.

BROMLEY.—BUILDING.—Mr. A. Frampton, Bromley-hill Estate Office, is to erect a new building at the corner of Bromley-road and Downham-way. The plans have been approved by the Lewisham B.C.

CHEAM.—HALL.—The Rector of Cheam has placed a contract with Messrs. Burges and Sons, Ltd., Wycliffe-road, Wimbledon, S.W., for a new hall. The plans have been prepared by Mr. T. Carr, A.R.I.B.A., Garthowen, Hockering-gardens, Woking.

CHISWICK. — BUILDING. — The T.C. are inviting tenders for conversion of the market buildings and Linden House in the High-road into a fire station, district offices and men's quarters, and for 32 cottage flats at Holly House, Boston Manor-road, Brentford. The plans are by Mr. L. A. Cooper, Borough Engineer and Surveyor.

EAST FINCHLEY. — CREMATORIUM.—The Islington B.C. has appointed Mr. Frank N. Falkner, 46, Berners-street, W.1, as quantity surveyor in connection with the erection of the proposed crematorium at the Cemetery, East Finchley.

EAST HAM. — DWELLINGS. — Plans and estimates have been prepared by the Borough Engineer amounting to £42,515 for the erection on the Bonny Downs site of 42 dwellings, and for the erection of 132 houses at £89,056.

ENFIELD.—HOUSES.—Plans have been prepared by Messrs. Swannell and Sly, High-street, Rickmansworth, for about 90 houses in Bullsmoor-lane.

ENFIELD.—EXTENSION.—The committee of the Enfield and District Isolation Hospital have approved plans for extensions. The architect is Mr. Henry R. Crabb, F.R.I.B.A., Market-chambers, Enfield. No contracts placed.

FOREST HILL.—FLATS.—And a garage are to be erected on the site of "The Mount," Queen's-road, from plans prepared by Mr. A. A. Higuer, 1, Montague-place, W.C.1. No contracts placed.

HAMMERSMITH.—EXTENSIONS.—The B.C. has approved plans submitted by the L.P.T.B. for extensions to the Hammersmith tram depôt in Great Church-lane, W.6.

HAMMERSMITH.—HALL.—Messrs. Perriam and Son, Regent House, Regent-street, W.1, are the architects for the erection of a church house, lecture hall at Rivercourt Methodist Church, King-street, next to Hampshire Hog-lane. The plans have been approved.

HAMMERSMITH.—BUILDING.—Is to be erected in Queen-street and Montpelier-road, from plans prepared by Mr. L. O. Woodward, architect. The work is being carried out by direct labour.

HAMMERSMITH. — SHOWROOMS. — Messrs. Percy Pratt and Blount, 174, High-street, Acton, W.3, are the architects for new showrooms and store at 47, Brook Green-road, W.6. Messrs. Dorey and Co., Ltd., of Brentford, are the builders.

HANOVER-STREET. — PREMISES. — Plans have been prepared by Messrs. W. A. Lewis and Partners, 130, Regent-street, W.1, for a block of showroom and office premises at No. 18. The contractors are Messrs. Perry and Perry, 20, Woodstock-street, W.1.

HARROW-ROAD.—FLATS.—Messrs. Anns and Haigh, 12b, George-street, Hanover-square, W.1, are the architects for flats at 703, Harrow-road, W.

HOMERTON.—CHAPEL.—Messrs. Mattock and Parsons, 165, Gray's Inn-road, W.C.1, have the contract for the proposed Wesleyan Methodist chapel in Church-road, E. The architects are Messrs. Gunton and Gunton, Empire House, St. Martin's-le-Grand, E.C.1.

ISLINGTON.—CLINIC.—The B.C. are inviting tenders for alteration and completion of the day nursery and sun clinic building in Scholefield-road, N.19. The architect is Mr. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2.

ISLINGTON.—REBUILDING.—Messrs. Lawrence, Ltd., are to rebuild their premises in Upper-street, N.1, to the plans of Mr. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2. The contractors are Messrs. Ferris Bros., 104, Churchfield-road, Acton, W.3.

ISLINGTON.—HOUSING.—B.C. are to invite tenders shortly for 209 dwellings, comprising 70 three-room, 124 four-room and 15 five-room flats, each with a scullery, bathroom and lavatory, on the site of Nos. 1 to 8 (inclusive), Warltersville-road. Mr. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2, is the architect for the schemes.

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KINGSTON-ON-THAMES.— SHOPS.— And showrooms are to be erected in Richmond-road and Fife-road, to the plans of Mr. Raymond J. Sargent, 6, Queen-street, W.1. The contractors are Messrs. Walker (Tooting), Ltd., 39, Defoe -road, S.W.17.

KNIGHTSBRIDGE.— FLATS.— Plans have been preapred by Messrs. Joseph, 2, Paul's Bakehouse-court, Godliman-street, E.C.4, for a block of flats at 20-22, Lowndes-square, S.W. No contracts placed.

KNIGHTSBRIDGE.— EXTENSION.— Messrs. Williams and Cox, F.R.I.B.A., architect, 34, Henrietta-street, W.C.2, are preparing plans for an extension to Messrs. Harvey, Nicholls and Co., Ltd.'s, premises at 202-205, Sloane-street, adoining their main building. This paragraph corrects the one appearing in our last issue.

LEE.—HALL.—Plans prepared by Messrs. T. Spencer Bright and Co., surveyors, 1, Newcourt, W.C.2, for a church hall and presbytery adjoining 47, Burnt Ash-hill, have been approved by the Lewisham B.C. No contracts placed.

LEWISHAM.—FLATS.—Mr. A. J. Caney, 12, King-street, Hammersmith, W.6, is the architect for flats to be erected at Ravensbourne Strand. No contracts placed.

LEWISHAM.— HOUSES.— Messrs. Henry Dawson and Son, 20, Ludgate-hill, E.C.4, are the architects for houses on the Marvels-lane estate.

LEWISHAM.—BUILDING.—Is to be erected at Lewisham Bridge, Loampit Vale, from plans by Mr. W. R. Davidge, F.R.I.B.A., 5, Victoria-street, S.W.1. The steelwork is by the Reinforced Concrete Steel Co., Ltd.

LEWISHAM.—EXTENSIONS.—Mr. W. R. Davidge, F.R.I.B.A., 5, Victoria-street, S.W.1, is the architect for extensions to the Century Works, Thurston-road, S.E. No contracts placed.

LEWISHAM. — HOUSES. — Messrs Wates (Streatham), Ltd., 95, London-road, Mitcham, are erecting 60 houses on a new road off Bromley-road.

LEWISHAM. — EXTENSIONS. — Are to be made at the Tower House, High-street, S.E., for the Royal Arsenal Co-operative Society, Ltd., Powis-street, Woolwich, S.E. The plans have been prepared by the society's staff architect, Mr. S. W. Ackroyd, F.R.I.B.A., Commonwealth-buildings, Albion-road, S.E.18, who will carry out the work by direct labour.

LEYTON.—EXCHANGE.—H.M.O.W. are inviting tenders for the erection of Leyton employment exchange.

MARYLEBONE-ROAD. — EXTENSION.—The governors of the Samaritan Free Hospital for Women have accepted the tender of Messrs. John Greenwood, Ltd., 12, Arthur-street, E.C.4, for a new radiological department. Plans have been prepared by Messrs. W. A. Pite, Son and Fairweather, 12, Carteret-street, S.W.1.

NEW CAVENDISH-STREET.—OFFICES.—Plans are being prepared by Messrs. Marshall and Tweedy, FF.R.I.B.A., 9, New Cavendish-street, W.1, for a block of office premises at the corner of New Cavendish-street and Hallam-street, W.1. No contracts placed.

NORBURY. — REBUILDING.—Messrs. Barclay, Perkins and Co., Ltd., Park-street, Southwark, S.E.1, have under consideration the rebuilding of the "Norbury Tavern" public-house, London-road, S.W. The architect is Mr. Joseph Hill, F.R.I.B.A., 34, Gordon-square, W.C.1. No contracts placed.

NORWOOD.—SHOPS.—And flats are to be erected by the London and Provincial Property Society, Ltd., 19, Victoria-street, S.W.1. The plans have been prepared by Messrs. Peter D. Stonham and Son, Hadley House, Upperton-road, Eastbourne. No contracts placed.

POPLAR.—TOWN HALL.—For the supply and erection of hollow tile floors and miscellaneous concrete work for the new Town Hall, which is to be erected in the Bow-road, the Contracts Committee of the B.C.

has recommended that the tender of Messrs. Diespeker and Co., Ltd. 57-60, Holborn-viaduct, E.C.1, be accepted, at £12,962 13s. 9d. Messrs. Culpin and Son, F. & A.R.I.B.A., 3, Portsmouth-street, W.C.2, are the architects.

ST. PANCRAS.—FLATS.—A further block of 45 flats and two shops in Stibbington-street, being the completion of the scheme for covering the site of the Sidney-street estate, is to be erected by the St. Pancras House Improvement Society, under the direction of Mr. Ian B. M. Hamilton, F.R.I.B.A., 16, Old Buildings, Lincoln's Inn, W.C.2. The contract has been placed with Messrs. Wheeler Brothers, 120, Church-street, Kensington, W.8.

ST. JOHN'S WOOD.—REBUILDING.—Plans have been prepared by Sir John Burnet, Tait and Lorne, 1, Montague-place, W.C.1, for flats, etc., at 58, Hamilton-terrace, N.W.8. No contracts placed.

SAVILLE-ROW. — POLICE STATION. — The Metropolitan Police Authorities are to have a new station erected in Saville-row, from plans prepared by Messrs. Burnet, Tait and Lorne, 1, Montague-place, W.C.1. No contracts yet placed.

SOUTH KENSINGTON.—EXTENSION.—The Kensington and Knightsbridge Electric Lighting Co., Ltd., have under consideration the erection of additional offices, etc., in Pelham-street, S.W.7. The architects are Messrs. Stanley Peach and Partners, 60, Warwick-square, S.W.1. No contracts placed.

SYDENHAM.—MAISONETTES.—And houses in Southend-lane are to be erected from plans by Messrs. T. Spencer Bright and Co., surveyors, 1, New-court, W.C.2.

TEDDINGTON.—FLATS.—Mr. Dudley G. Marsh, L.R.I.B.A., Jessel-chambers, Chancery-lane, W.C.2, has prepared plans for a layout of the site of "Bucklands," Broom-road, showing three blocks of 48 flats. No contracts placed.

TOTTENHAM COURT-ROAD.—REBUILDING.—Messrs. Heal and Son, Ltd., have under consideration the rebuilding of more of their premises. The architect is Mr. Edward Maufe, F.R.I.B.A., 4, Pickering-place, S.W.1. No contracts placed.

VICTORIA. — EXTENSIONS. — H.M.O.W. have placed a contract with Messrs. Galbraith Bros., Ltd., 71, Waterloo-street, Camberwell, S.E.5, for extensions to the Victoria telephone exchange.

WATFORD.—HOUSES.—The Corporation are inviting tenders for 120 houses on the Leavesden-green estate (section No. 3). Mr. W. W. Newman, M.Inst.C.E., F.S.I., Borough Engineer, has prepared the plans.

WESTMINSTER.—ALTERATIONS.—And improvements are to be made to the office building at 5, Smith-square, S.W.1, to the plans of Mr. F. P. M. Woodhouse, A.R.I.B.A., 27, Curzon-street, W.1.

WILLESDEN.—ADDITION.—Messrs. George Kemp, Ltd., are to extend their premises in the North Circular-road, N.W. The contractors are Messrs. Higgs and Hill, Ltd., Crown-works, South Lambeth-road, S.W. The architects are Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1.

WIMBLEDON.—ADDITIONS.—The Corporation has approved plans for additional buildings at Beltane School, Queensmere House, Queensmere-road, and Bathgate-road.

WIMBLEDON. — EXTENSIONS. — The Corporation has approved plans for extensions to the Wandle Mill for Messrs. Connolly Bros. (Curriers), Ltd., 101, Chalton-street, N.W.1. The architects are Messrs. R. J. and J. S. Thomson, 49, Hill-road, Wimbledon, S.W.19. No contracts placed.

WOODFORD GREEN.—EXTENSIONS. — The East Ham C.B. has approved revised plans and estimates prepared by the Borough Engineer for extensions to the Harts Sanatorium. The cost is estimated at £35,129.

WOOD GREEN.—FLATS.—The Mowbray Estates, Ltd., are to erect a block of ten flats in Ewart-grove, N. The contractors are the South Yorkshire Construction Co. (London), Ltd., 228, High-road, N.22. The plans have been prepared by Mr. H. Ingham Ashworth, A.R.I.B.A., 6, Raymond-buildings, Gray's Inn, W.C.1.

NEW CINEMAS

BIRMINGHAM.—A cinema is proposed on a site at The Green, Kings Norton, for Mr. Ernest A. Turner, Bedford House, Hampton-lane, Solihull. The architect is Mr. Harold S. Scott, A.R.I.B.A., 115, Colmore-row, Birmingham.

CLIPSTONE, NOTTS.—Southwell R.D.C. have approved plans for a cinema in Mansfield-road for the Kew Cinema Co. The contractors are Messrs. A. Eastwood and Sons, of Warsop.

CUPAR.—The Dean of Guild Court has approved of plans for a scheme of alterations to be carried out at the Regal Cinema, South Union-street, Cupar.

GATESHEAD.—A scheme is proposed for the erection of a cinema at Macadam-street and Telford-street. Messrs. Stanton, Atkinson and Bird, solicitors, 46, Grainger-street, Newcastle-on-Tyne, are acting for the promoters.

HEXHAM.—Messrs. Middlemiss and Son, of Corbridge, have secured the contract for the rebuilding of the "Gem" cinema for the Hexham Entertainments Co. The architects are Messrs. Hetherington and Wilson, LL.R.I.B.A., 52, Westgate-road, Newcastle-upon-Tyne.

LINCOLN.—The British Playhouses and Film Studios' Parent Co., Ltd., are to erect a cinema opposite the Cattle Market to seat 1,750.

NEWCASTLE-ON-TYNE. — The contract for converting St. James' Boxing Hall, St. Andrew's-street, into a cinema is to be carried out by the proprietor, Mr. J. J. Paget. The architect is Mr. E. M. Lawson, Barras-buildings, Barras Bridge, Newcastle.

NOTTINGHAM.—The British Playhouses and Film Studios' Parent Co., Ltd., propose the erection of a cinema on a site between Bath-street, Brook-street, and Freeman-street.

NUNEATON.—Messrs. G. E. and W. Wincott, 64, Coton-road, Nuneaton, have secured the contract for the erection of the "Ritz" cinema for the Union Cinema Co., Ltd., 15, Lower Regent-street, S.W.1. Messrs. Verity and Beverley, FF.R.I.B.A., 32, Old Burlington-street, London, W.C., are the architects.

RADCLIFFE (LANCS).—Plans have been approved for the erection of a cinema in the Market-place for Odeon Theatres, Ltd., Cornhill House, Bennett's-hill, Birmingham. The architect is Mr. Harry W. Weedon, A.R.I.B.A., 84, Colmore-row, Birmingham.

RIPON.—Plans are being prepared by Messrs. Pennington, Hustler and Taylor, 45, Ropergate, Pontefract, for the erection of a cinema for Mr. E. R. Wood, the proprietor of the "Palladium."

SPILSBY.—The Franklin Cinema Co., Ltd., of Spilsby, are proposing to erect a cinema on The Terrace. Plans are being prepared by Messrs. Bright and Thoms, 9, St. Peter's Church-walk, Nottingham. No contracts let.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116, Chancery-lane, W.C.2, from the documents available at the Companies Registry.

REVA ESTATES (LIVERPOOL), LTD. (317,873). Registered August 25. "Greystoke," Swanside-road, Huyton. Builders and contractors, etc. Nominal capital, £1,000.

A. J. PUGH & Co., LTD. (317,774). Registered August 22. Kilnhouse-road, Ryecroft, Rawmarsh, near Rotherham. Builders and contractors. Nominal capital £5,000.

A. FISHWICK & SON, LTD. (318,063). Registered August 31. 401, Ashton Old-road, Manchester, 11. Plumbers, gas, water, heating and ventilating engineers, etc. Nominal capital, £7,000.

M. HARRIS (BUILDERS), LTD. (317,795). Registered August 22. Sceptre House, 169, Regent-street, W.1. Builders and contractors, etc. Nominal capital, £2,000.

CLIFFORD HULME, LTD. (317,782). Registered August 22. Brick manufacturer, at Lyme Pits Brickworks, Haydock, St. Helens. Nominal capital, £6,000.

PALACE BUILDERS (COVENTRY), LTD. (317,720). Registered August 20. 39, Hacton-lane, Upminster-road, Hornchurch. Builders, etc. Nominal capital, £2,000.

CATTARZ TIMBER CO., LTD. (317,693). Registered August 20. Bush House, Aldwych, W.C.2. Timber merchants, etc. Nominal capital, £10,000.

JOSEPH WRIGHT & SONS (BUILDERS' MERCHANTS), LTD. (317,709). 12, Cherry-street, Birmingham. Registered August 20. Builders' merchants, etc. Nominal capital, £5,000.

HAWKINS (BUILDERS), LTD. (317,656). Registered August 19. Chislehurst-road, near Broom Hill Common, Orpington, Kent. Builders, decorators, sanitary engineers, etc. Nominal capital, £1,000.

C. H. NORMANTON & SON, LTD. (313,364). Registered September 10. 167, Plymouth-grove, Manchester. Brick manufacturers, builders and contractors. Nominal capital, £12,500.

BISHOP BROTHERS (BOW), LTD. (318,361). Registered September 10. Clifden House, Fairfield-road, Bow, E.3. Builders, decorators and contractors. Nominal capital, £1,000.

HAROLD WHITAKER, LTD. (318,342). Registered September 9. Plumber and sanitary and electrical engineer. At 14, Stirling-place, Shipley. Nominal acpital, £1,000.

GARNER & YATES, LTD. (318,516). Registered September 15. 31, Broom-road, Teddington, Middlesex. To acquire lands or buildings, to develop the same as a building estate, etc. Nominal capital, £1,000.

MOLESEY CONTRACTORS & SUPPLIES, LTD. (318,495). Registered September 14. 120, Walton-road, East Molesey, Surrey. Builders, timber merchants, contractors, etc. Nominal capital, £1,000.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st JANUARY, 1936.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberdare	1/6	1/1½
Abergavenny	1/6	1/1½
Abingdon	1/5	1/0½
Accrington	1/6½	1/2
Aldeburgh	1/2½	11
Aldershot	1/3½	11½
Alfreton	1/6½	1/2
Alnwick	1/6	1/1½
Altrincham	1/6½	1/2
Amble	1/6	1/1½
Amersham	1/4½	1/0½
Ammanford	1/6½	1/2
Andover	1/3½	11½
Ardingley	1/4½	1/0½
Arundel	1/4	1/0
Ascot	1/4½	1/0½
Ashby-de-la-Zouch	1/5	1/0½
Ashford (Kent)	1/3½	11½
Ashford (Middlesex)	1/5½	1/1½
Ashington	1/6	1/1½
Ashstead	1/5	1/0½
Ashton-under-Lyme	1/6½	1/2
Aylesbury	1/4	1/0
Aylsham	1/3½	11½
Bagshot	1/3½	11½
Banbury	1/4	1/0
Barnsley	1/6½	1/2
Barnstaple	1/4½	1/0½
Barrow-in-Furness	1/6½	1/2
Barry	1/6½	1/2
Basingstoke	1/4	1/0
Bath	1/5½	1/1½
Batley	1/6½	1/2
Beaconsfield	1/4½	1/0½
Beccles	1/3	11½
Bedford	1/5½	1/1½
Berkhamsted	1/4	1/-
Berwick	1/5½	1/1½
Beverley	1/6½	1/2
Bexhill-on-Sea	1/4½	1/0½
Bideford	1/4½	1/0½
Biggleswade	1/4	1/-
Billericay	1/4	1/-
Birchington	1/4	1/-
Birkenhead	1/8‡	1/3½
Birmingham	1/6½	1/2
Bishop Auckland	1/6	1/1½
Bishops Stortford	1/5	1/0½
Blackburn	1/6½	1/2
Blackpool	1/6½	1/2
Blyth	1/6½	1/2
Bognor Regis	1/4	1/-
Bolton	1/6½	1/2
Bournemouth	1/5½	1/1½
Bracknell	1/4	1/-
Bradford	1/6½	1/2
Bradford-on-Avon	1/3½*	11½
Braintree	1/4½	1/0½
Brentwood	1/6	1/1½
Bridgwater	1/4½	1/0½
Bridlington	1/6	1/1½
Brighouse	1/6½	1/2
Brighton	1/5½	1/1½
Bristol	1/6½	1/2
Broadstairs	1/4	1/-
Bromsgrove	1/5½	1/1½
Buckley	1/6½	1/2
Bungay	1/2½	11
Burnham-on-Crouch	1/3	11½
Burnley	1/6½	1/2
Burslem	1/6½	1/2
Burton-on-Trent	1/6½	1/2
Bury	1/6½	1/2
Bury St. Edmunds	1/4	1/-
Buxton	1/6	1/1½
Byfleet	1/4½	1/0½
Cambridge	1/6	1/1½
Canterbury	1/4	1/-
Cardiff	1/6½	1/2
Carlisle	1/6½	1/2
Carnforth	1/6½	1/2
Castleford	1/6½	1/2
Caterham	1/5	1/0½
Chard	1/3½*	11½
Chatham	1/5	1/0½
Chelmsford	1/5	1/0½
Cheltenham	1/5	1/0½
Chepstow	1/5½	1/1½
Chertsey	1/5	1/0½
Chester	1/6½	1/2
Chesterfield	1/6½	1/2
Chichester	1/4	1/-
Chorley	1/6½	1/2
Cirencester	1/4*	1/-
Clacton	1/4½	1/0½
Cleveleys	1/6½	1/2
Clitheroe	1/6½	1/2
Cobham	1/5	1/0½
Colchester	1/5½	1/1½
Colwyn Bay	1/5½	1/1½
Congleton	1/6	1/1½
Coventry	1/6½	1/2
Cranbrook	1/3	11½
Cranleigh	1/3½	11½
Crawley	1/4½	1/0½
Crewe	1/5½	1/1½
Cromer	1/3½	11½
Crowborough	1/4½	1/0½
Cuckfield	1/4½	1/0½
Darlington	1/6½	1/2
Darwen	1/6½	1/2
Daventry	1/5	1/0½
Deal	1/4	1/-
Denbigh	1/5	1/0½
Derby	1/6½	1/2
Devizes	1/3*	11½
Dewsbury	1/6½	1/2
Didcot	1/4½	1/0½
Diss	1/3	11½
Doncaster	1/6½	1/2
Dorchester	1/4*	1/-
Dorking	1/4½	1/0½
Dover	1/4	1/-
Dovercourt	1/4½	1/0½
Driffield	1/5	1/0½
Droitwich	1/5½	1/1½
Dudley	1/6½	1/2
Dunstable	1/4½	1/0½
Durham City	1/6½	1/2
Eastbourne	1/5½	1/1½
E.Glam.(Mon.Val.)	1/6	1/1½
East Grinstead	1/4½	1/0½
Edenbridge	1/4½	1/0½
Ely	1/3	11½
Epping	1/6½	1/2
Exeter	1/5½†	1/1½
Exmouth	1/4½	1/0½
Fakenham	1/3	11½
Falmouth	1/5	1/0½
Fareham	1/4	1/-
Faversham	1/3½	11½
Felixstowe	1/5	1/0½
Filey	1/5	1/0½
Fleetwood	1/6½	1/2
Flint	1/6	1/1½
Folkestone	1/4	1/-
Frinton-on-Sea	1/4½	1/0½
Frome	1/3½*	11½
Gainsborough	1/5½	1/1½
Gateshead	1/6½	1/2
Gillingham	1/5	1/0½
Glossop	1/6½	1/2
Gloucester	1/5½†	1/1½
Godalming	1/4½	1/0½
Goole	1/6½	1/2
Gosport	1/5½	1/1½
Grantham	1/5	1/0½
Gravesend	1/6	1/1½
Gt. Yarmouth	1/4½	1/0½
Grimsby	1/6½	1/2
Guildford	1/4½	1/0½
Guilsborough	1/5	1/0½
Halifax	1/6½	1/2
Hanley	1/6½	1/2
Harpenden	1/5	1/0½
Harrogate	1/6½	1/2
Hartlepools	1/6½	1/2
Harwich	1/4½	1/0½
Haslemere	1/3½	11½
Hastings	1/4	1/0
Hatfield	1/5½	1/1½
Haywards Heath	1/4½	1/0½
Hednesford	1/6	1/1½
Hemel Hempstead	1/5½	1/1½
Henley	1/4½	1/0½
Hereford	1/4½*	1/0½
Herne Bay	1/4	1/0
Hertford	1/5½	1/1½
Heysham	1/6½	1/2
Hitchin	1/5	1/0½
Hoddesdon	1/5½	1/1½
Holt	1/2½	11
Horley	1/4	1/-
Horsham	1/4	1/-
Horwich	1/6½	1/2
Huddersfield	1/6½	1/2
Hull	1/6½	1/2
Hunstanton	1/3	11½
Huntingdon	1/3½	11½
Ilfracombe	1/4½	1/0½
Ingatestone	1/4½	1/0½
Ipswich	1/5½	1/1½
Isle of Thanet	1/4	1/-
Isle of Wight	1/3½	11½
Keighley	1/6½	1/2
Kenilworth	1/6½	1/2
Kettering	1/6	1/1½
Kidderminster	1/5½	1/1½
King's Lynn	1/4	1/-
Kirkham	1/6½	1/2
Knowle	1/6	1/1½
Lancaster	1/6½	1/2
Leamington	1/6	1/1½
Leatherhead	1/5½	1/1½
Leeds	1/6½	1/2
Leicester	1/6½	1/2
Leighton Buzzard	1/3½	11½
Letchworth	1/5	1/0½
Lewes	1/3	11½
Lichfield	1/5½	1/1½
Lincoln	1/6½	1/2
Littlehampton	1/4	1/-
Liverpool	1/8‡	1/3½
Llandudno	1/5½	1/1½
Llanelly	1/6½	1/2
London:		
12 m. radius	1/8*	1/3
12-15 m. radius	1/7½*	1/2½
Long Eaton	1/6½	1/2
Longton	1/6½	1/2
Loughborough	1/6½	1/2
Louth	1/5	1/0½
Lowestoft	1/4½	1/0½
Luton	1/6	1/1½
Macclesfield	1/6	1/1½
Maidenhead	1/5	1/0½
Maidstone	1/5	1/0½
Malvern	1/5	1/0½
Manchester	1/6½	1/2
Manningtree	1/3	11½
Mansfield	1/6½	1/2
March	1/3½	11½
Margate	1/4	1/-
Market Harborough	1/5½	1/1½
Matlock	1/5	1/0½
Melton-Constable	1/2½	11
Melton Mowbray	1/5½	1/1½
Merthyr Tydfil	1/6	1/1½
Middlesbrough	1/6½	1/2
Middleton	1/6½	1/2
Middlewich	1/5½	1/1½
Milford Haven	1/4½	1/0½
Morecambe	1/6½	1/2
Morley	1/6½	1/2
Mundesley	1/3½	11½
Nantwich	1/5½	1/1½
Newark-on-Trent	1/5½	1/1½
Newbury	1/4	1/-
Newcastle-on-Tyne	1/6½	1/2
Newcastle-u-Lyme	1/6½	1/2
New Forest	1/3½	11½
Newmarket	1/4½	1/0½
Newport, Mon.	1/6½	1/2
Newport Pagnell	1/3½	11½
Northampton	1/6½	1/2
Norwich	1/6	1/1½
Nottingham	1/6½	1/2
Nuneaton	1/6½	1/2
Oakham	1/5	1/0½
Oldham	1/6½	1/2
Ormskirk	1/6½	1/2
Oxford	1/6	1/1½
Oxted	1/3½	11½
Paignton	1/6	1/1½
Peterborough	1/6	1/1½
Plymouth	1/6½†	1/2
Pontypridd	1/6	1/1½
Portsmouth	1/5½	1/1½
Port Talbot	1/6½	1/2
Preston	1/6½	1/2
Pulborough	1/3	11½
Ramsgate	1/4	1/-
Reading	1/5½	1/1½
Redditch	1/5½	1/1½
Redhill	1/4½	1/0½
Reigate	1/4½	1/0½
Retford	1/5	1/0½
Rickmansworth	1/6	1/1½
Ripon	1/5	1/0½
Rochdale	1/6½	1/2
Rochester	1/5	1/0½
Rugby	1/6½	1/2
Saffron Walden	1/3	11½
St. Albans	1/6	1/1½
St. Helens	1/6½	1/2
St. Neots	1/3½	11½
Salisbury City	1/3½*	11½
Salisbury Plain	1/3½*	11½
Sawbridgeworth	1/4½	1/0½
Saxmundham	1/2½	11
Scarborough	1/6	1/1½
Selby	1/6½	1/2
Sevenoaks	1/5	1/0½
Sheerness	1/4	1/-
Sheffield	1/6½	1/2
Shipley	1/6½	1/2
Shoeburyness	1/6	1/1½
Shoreham	1/5	1/0½
Shrewsbury	1/5½	1/1½
Sittingbourne	1/3½	11½
Skegness	1/5½	1/1½
Sleaford	1/5	1/0½
Slough	1/5½	1/1½
Southampton	1/5½	1/1½
Southend-on-Sea	1/6	1/1½
Southport	1/6½	1/2
South Shields	1/6½	1/2
Spalding	1/4	1/-
Stafford	1/6	1/1½
Staines	1/5½	1/1½
Stamford	1/5	1/0½
Stevenage	1/5	1/0½
Stockport	1/6½	1/2
Stockton-on-Tees	1/6½	1/2
Stoke-on-Trent	1/6½	1/2
Stourbridge	1/6	1/1½
Stourport	1/5½	1/1½
Stowmarket	1/3	11½
Stratford-on-Avon	1/5	1/0½
Stroud	1/5†	1/0½
Sunderland	1/6½	1/2
Sutton Coldfield	1/6½	1/2
Swaffham	1/2½	11
Swanage	1/4½*	1/0½
Swansea	1/6½	1/2
Swindon	1/5*	1/0½
Tamworth	1/6	1/1½
Taunton	1/4½	1/0½
Tenterden	1/3½	11½
Tewkesbury	1/5*	1/0½
Thetford	1/3	11½
Thorpe Bay	1/6	1/1½
Todmorden	1/6½	1/2
Tonbridge	1/5	1/0½
Torquay	1/6	1/1½
Totnes	1/4½†	1/0½
Trowbridge	1/3½*	11½
Truro	1/3½	11½
Tunbridge Wells	1/5	1/0½
Uppingham	1/5	1/0½
Uttoxeter	1/5	1/0½
Wakefield	1/6½	1/2
Walsall	1/6½	1/2
Walsden	1/6½	1/2
Walton-on-Naze	1/4½	1/0½
Ware	1/5½	1/1½
Warminster	1/3½*	11½
Warrington	1/6½	1/2
Warwick	1/6	1/1½
Wellingborough	1/6	1/1½
Wells (Norfolk)	1/2½	11
Welwyn	1/5½	1/1½
Welwyn Gar. City	1/6½	1/2
West Bromwich	1/6½	1/2
Westcliff-on-Sea	1/6	1/1½
Weston-super-Mare	1/5½	1/1½
Weybridge	1/5	1/0½
Weymouth	1/4*	1/-
Whitby	1/5½	1/1½
Whitstable	1/4	1/-
Widnes	1/6½	1/2
Wigan	1/6½	1/2
Wigton	1/5	1/0½
Willington	1/6	1/1½
Wilmslow	1/6½	1/2
Winchester	1/4½	1/0½
Windermere	1/5	1/0½
Windsor	1/5½	1/1½
Wisbech	1/3½	11½
Witham	1/4½	1/0½
Woking	1/4½	1/0½
Wokingham	1/4½	1/0½
Wolverhampton	1/6½	1/2
Woodbridge	1/3½	11½
Worcester	1/5½	1/1½
Workington	1/5	1/0½
Worksop	1/5½	1/1½
Worthing	1/4	1/-
Wrexham	1/6	1/1½
Wroxham	1/4	1/-
Wycombe	1/5	1/0½
Wymondham	1/3	11½
Yeovil	1/4½*	1/0½
York	1/8½	1/3

* Painters 1d. less than other Craftsmen. † Painters ½d. less than other Craftsmen. ‡ Plasterers 1/9.

For Building Trade Wages in Scotland see page 612.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

SEPTEMBER 25.

***Birmingham.**—Erection.—Of police school at Sigbeth police station, for T.C. Herbert J. Manzoni, Council House. Dep. £2 2s.

London.—Pithead Baths.—At the following collieries, Clock Face, Bold, near St. Helens, Lancs; Markham, New Tredegar, Monmouthshire; Markham Main, near Doncaster, Yorks, for Miners' Welfare Committee. Applications to secretary, before Friday, September 25.

SEPTEMBER 28.

Abingdon.—Erection.—Of 68 houses in Drayton-rd., for T.C. T.C. Dep. £2 2s.

Alfreton.—Erection.—Of 1 house in Cemetery-ln. and street works incidental thereto, also 1 house, Brenden-av., Somercotes, for U.D.C. H. R. Cleaver, clerk. Dep. £2 2s.

Bakewell.—Casements.—Metal casements at new Lady Manners school, for Derbyshire E.C. George H. Widdows, County Architect, Derby. Dep. £2 2s.

Bangor, N. Wales.—Lodge.—In grounds of George Hostel, for North Wales Counties Training College Committee. T. E. Jones & Ap Thomas, architects, Midland Bank-chambs.

Broadstairs and St. Peter's.—Construction.—Of sea wall and cliff protection works at Western Esplanade, opposite "Domus," for U.D.C. S. W. Richardson, E. and S., Pierremont Hall. Dep. £3 3s.

Bromley (Kent).—Brick Wall.—Along south-eastern boundary of field adjacent to Valley school, for T.C. Harold Cliffe, B.E.

Camberwell.—Erection.—Of overground public convenience at Cross-rd., Peckham Rye, for B.C. B.E. and S. Dep. £2 2s.

Conway.—Houses.—16, in Tywyn, Deganwy, for T.C. B.E. Dep. £2 2s.

Culter.—Addition.—To Linmoor Home. G. Bennett Mitchell & Son, architects, 1, West Craibstone-st., Bon-Accord-sq., Aberdeen.

Dalkeith.—Erection.—Of tenement block of 8 houses in High-st., for T.C. Morham & Brotchie, F.F.S., surveyors, 29, Hanover-st., Edinburgh.

Derby.—Erection.—Of gymnasium and assembly hall, Nottingham-rd. schools, for C.B. C. H. Aslin, F.R.I.B.A. Dep. £1 1s.

Derby.—Erection.—Of additional classroom at Normanton School, for E.C. C. H. Aslin, F.R.I.B.A. Dep. £1 1s.

Derby.—Erection.—Of Girls' Secondary School, Normanton, for C.B. C. H. Aslin, F.R.I.B.A. Dep. £2 2s.

Derby.—Erection.—Of additional classrooms, Sinfin junior school, for E.C. C. H. Aslin, F.R.I.B.A. Dep. £1 1s.

Devizes.—Exterior Painting.—Of Corn Exchange, Northgate House and Long's Stores, for T.C. B.S.

Dewsbury.—Alterations.—To public baths, Westgate, for C.B. Borough Architect and Buildings Surveyor.

Dundee.—Additions.—To janitor's house, Liff-rd. school, for T.C. City Quantity S., 21, City-sq.

Durham.—Gymnasiums.—At Howlish Hall, Coundon, and The Haven, Hartlepool; additional workshops, Elvet Station, Durham; and gymnasium, Urpeth Lodge, Pelton, for C.C. F. Willey, F.R.I.B.A., 34, Old Elvet.

Durham.—Erection.—Of junior instruction centre, for C.C. F. Willey, F.R.I.B.A.

Durham.—Improvements.—For (1) Burnhope new council school—levelling, drainage, and laying out of playing fields; (2) Seaham Harbour Deneside council school—levelling, drainage, and laying out of playing fields; (3) Bowburn council school—(a) builder's work in connection with improvements to playgrounds; (b) tar pavior's work, and (4) new Penshaw council school—builder's work in connection with general repairs, for C.C. F. Willey, F.R.I.B.A., 34, Old Elvet, Durham.

East Dereham.—Decorative Repairs.—To new hall and painting of 44 houses, for U.D.C. C. H. Reeder, clerk, Quebec-rd., Dereham.

Felling.—Houses.—150 on Nest House estate, for U.D.C. H. Fawcett, Housing Architect. Dep. £2 2s.

Finchley.—Erection.—Of garage at Holme Chase Sub-station, for B.C. B. Electrical E. Dep. £1.

Finchley.—Extensions.—Of roof of grand stand on Glebe Land, North Finchley, for T.C. P. T. Harrison, B.E., 294-296, Regent's Park-rd., N.3. Dep. £1.

Glamorgan.—Building.—Tynewydd school, Ogmore Vale, offices for girls and infants; and Caerphilly senior school, improvements to playing field, for C.C. H. Rowland, clerk, County Hall, Cardiff.

Glasgow.—Telephone Exchange.—At Wellshot-rd., Shettleston, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Glasgow.—Telephone Exchange.—At Kilmarnock-rd., Newton Mearns, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Halesowen.—Painting 215 houses on Colman Hill housing estate, Cradley, for U.D.C. E. and S.

Halesowen.—Demolition.—Of existing buildings on Hill Bank Farm estate, Cradley, for U.D.C. S.

Hoyland Common.—Kitchen.—At school, for West Riding C.C. A. Rayner, 151, Cross Hill, Ecclesfield, Sheffield.

Knaresborough.—Demolition.—Of 19 buildings, or lesser number, for U.D.C. G. W. Boyes, clerk.

Leeds.—Painting.—Of Corn Exchange, for T.C. J. E. Acfield, City E.

Lumsden.—Various Works.—In connection with erection of houses, for Aberdeen C.C. E. L. Williamson, architect, 154, Union-st., Aberdeen.

Machynlleth.—House.—Reconstruction of drains, and erection of concrete pumping house, at Casual Wards, for Montgomery C.C. H. Carr, F.S.I., L.R.I.B.A., County Architect, Welshpool. Dep. £2 2s.

Maidenhead.—Construction.—Of walls and floor of swimming pool, for T.C. Lieut.-Col. P. Johns, B.S., The Guildhall. Dep. £3 3s.

Milngavie.—Telephone Exchange.—At Ashfield-rd., for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Newcastle.—Renewing.—Stonework of the Old Castle, for T.C. City Estate and Property Surveyor.

Newcastle-upon-Tyne.—Stonework.—At various sections of Old Town walls and towers, for T.C. City Estate and Property Surveyor.

Newcastle-upon-Tyne—Painting Work.—To Gallowgate Baths, for T.C. City Estate and Property S.

Oldham.—Erection.—Of children's shelter and conveniences at Stoneleigh Park, for C.B. B.E. and S. Dep. £2 2s.

Oldham.—Lay-out.—And drainage of ground, construction of bowling greens, etc., at Stoneleigh Park, for C.B. B.E. and S. Dep. £2 2s.

Salford.—Demolition.—Of buildings on site of Broughton Town Hall, Duke-st., Lower Broughton, for T.C. H. H. Tomson, T.C.

Tipton.—Slating.—Of 73 houses on section No. 2, Alexandra-rd. housing scheme, for U.D.C. Charles R. Gallie, A.R.I.B.A., Housing Director, Municipal-bldgs., Sedgley-rd. West.

Wakefield.—Farm Buildings.—At Mental Hospital, for West Riding Mental Hospitals Board. W. E. H. Burton, Architect and E., Mental Hospital. Dep. £2 2s.

Welshpool.—Lavatories.—On upper floor of Town Hall, for T.C. B.S.

West Hartlepool.—Painting.—Of the interior of museum and art gallery, for T.C. B.E. Dep. £5.

Yorkshire.—Works.—At County Hospital, Wakefield—internal decorations; County Institution, Otley—internal decorations, for West Riding C.C. Percy O. Platts, A.R.I.B.A., West Riding Architect, County Hall, Wakefield.

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SEPTEMBER 29.

Aylesbury.—Sheds.—Wooden sheds on council's housing estates, for T.C. B.E. and S. Dep. £2 2s.

Bangor, Ireland.—Enlarging.—Existing convenience at Esplanade, for T.C. R. M. Moore, T.C. Dep. £5.

Blackpool.—Tiles.—1,000 square yds. of Trafford tiles, etc., at filter house, Barnacre, near Garstang, for Fylde Water Board. Geo. F. Atkinson, E., Sefton-st., Blackpool. Dep. £2 2s.

Bridgwater.—Houses.—2 non-parlour three-bedroom type, in parish of Broomfield, for R.D.C. L. S. Clatworthy, architect for Council's Housing Schemes.

Conisborough.—Painting.—External painting of isolation hospital, Crookhill-rd., for Doncaster and Mexborough Joint Hospital Board. S., Nether Hall, Doncaster.

Hornchurch.—Houses.—Pair of semi-detached houses, Globe-rd., for U.D.C. Douglas E. Hart, Acting Surveyor. Dep. £2 2s.

Knaresborough.—Exterior Painting.—Of 48 houses, for R.D.C. A. E. W. Lupton, S., 14, Bower-rd., Harrogate.

Liverpool.—Railings.—Supplying and fixing wrought iron boundary railings and gates at Springwood recreation ground, for Corporation. Land Steward and Surveyor.

Shrewsbury.—Wall.—Brick boundary wall about 66 yards in length and other appurtenant works on land adjoining Cattle Market and approached from Meadow-pl., for T.C. A. W. Ward, B.S.

Solihull.—Demolishing.—"The Poplars," at corner of Lode-la. and Warwick-rd., for U.D.C. R. Dunn, E. and S., Streetsbrook-rd.

Sunderland.—Completion.—And maintenance of 44 houses, partially erected, at Utterdipe Estate, and making good defective work and items requiring attention, for T.C. B.E. Dep. £2 2s.

Tayport.—Erection.—Of three-story tenement in in Market-pl., for T.C. Walker & Pride, architects, Church-sq., St. Andrews. Dep. £1 1s.

SEPTEMBER 30.

Amesbury.—Erection.—Of brick building to house refuse incinerator, and erection of approx. 286 yds. of cattle-proof fencing on same site, for R.D.C. C. Laidman, S.

Ashford.—Installation.—Of central heating and hot-water supply in connection Isolation Hospital extensions, for U.D.C. A. F. Webster, S., 5, North-st. Dep. £1 1s.

Birstall.—Building.—Levelling, draining and making paths for burial ground, erecting buildings, etc., for P.C. Frank H. Smith, architect, 6, Pocklington's-walk, Leicester. Dep. £2 2s.

Brentwood.—Houses.—12, together with drains, footpaths, fencing, gates, and other incidental works, adjoining Costead Manor-rd., for U.D.C. D. A. Dallas, E. and S. Dep. £2 2s.

Carmarthen.—Admission Hospital.—And nurses' home at Mental Hospital, for Joint Counties Mental Hospital. W. Vincent Morgan, A.R.I.B.A., County Architect, County Offices, Carmarthen. Dep. £3.

Glasgow.—Telephone Exchange.—At Kilmarnock-rd., Newton Mearns, for H.M.O.W. Architect, 122, George-st., Edinburgh. Dep. £1 1s.

Horbury.—Painting.—Internal painting and decorating of Town Hall, for U.D.C. S.

Leeds.—Erection.—Of large municipal hostel, in Beeston-rd., for T.C. T.C., Room 57. Dep. £2.

Leeds.—Painting.—Of buildings at Knostrop sewage works, for T.C. E. H. Howatson, Sewerage Engineer.

Luton.—Houses.—For R.D.C. H. Pickering, S., 73, West-parade, Dunstable. Dep. £1 1s.

Narberth.—Houses.—8, for R.D.C. J. Owen Parry & Lewis, architects, Ammanford. Dep. £1 1s.

Oakham.—Houses.—6, at Hill-rd., for U.D.C. H. Tabberer, architect, 9, Burley-rd. Dep. £2 2s.

Soke of Peterborough.—Painting.—And decorating and repairs, at Gaol Buildings, Thorpe-rd., Peterborough, for C.C. Walter J. Deacon, clerk, Bridge-st., Peterborough.

Spenborough.—Decorations.—Internal, of Mechanics' Institute, Gomersal, for U.D.C. S.

Stalybridge.—Diversion of circulating water goyt, concrete raft foundations, and surface water drainage, in extensions to Hartshead generating station, for Stalybridge, Hyde, Mossley, and Dukinfield Transport and Electricity Board. W. H. George & Son, architects, 7, Warrington-st., Ashton-under-Lyne. Dep. £1.

Uppingham.—Houses.—16, at Uppingham, and 4, at North Luffenham, for R.D.C. George Dolphin, S. Dep. £2 2s.

Welwyn Garden City.—Construction.—Of 2 district sewage pumping stations, together with pumping mains, compensating chambers, etc., for U.D.C. Capt. W. E. James, E. and S. Dep. £3 3s.

Yeovil.—Erection.—Of employment exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

OCTOBER 1.

Clayton-le-Moors.—Houses.—18, on Oakenshaw housing estate, for U.D.C. A. Dodgeon, S., Council Offices. Dep. £2 2s.

Hailsham.—Lavatories.—At cemetery, for P.C. Eric Mann, clerk, 4, Kirby Croft-chambs.

Hemel Hempstead.—Heating.—And hot water services at Post Office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Liskeard.—Houses.—18, for R.D.C. E. C. Higman, architect, Barras-st.

London.—Erection.—Of 40 tenements, for Islington B.C. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2. Dep. £3.

Southampton.—Fencing.—220 lin. yds. of iron fencing at St. Mary Extra Cemetery, for C.B. B.E.

***Warwick.**—Extension.—Of Bishop Vesey's Grammar School, Sutton Coldfield, for C.C. County Architect. Dep. £2 2s.

Willesden.—Erection.—Of school, at Gladstone Park, for E.C. F. E. Wilkinson, M.I.C.E.

OCTOBER 2.

Atcham.—Houses.—Six at Cross Houses, for R.D.C. S., 24, St. John's-hill, Shrewsbury.

Bournemouth.—Foundation Work.—For S.S.O. and garage, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Cleobury Mortimer.—Alterations.—Redecorations and repair work at Childe's school and teachers' house, for Salop C.C. A. G. Chant, A.R.I.B.A., County Architect, 5, Belmont, Shrewsbury.

***Elham.**—Erection.—Of houses at Eastbrook, Lyminge, for R.D.C. J. L. Seaton Dahl, F.R.I.B.A., Radnor-chambs., Folkestone. Dep. £2 2s.

Freebridge Lynn.—Cottages.—Three pairs of cottages and three pairs of bungalows, Back-la., Pott Row, Grimston, for R.D.C. G. W. Little, Housing Officer, St James's Clubhouse Buildings, St. James's-st., King's Lynn.

London.—Extension.—To Popesgrove Telephone Exchange, for H.M.O.W. Room 65D, Third Floor H.M. Office of Works, S.W.1. Dep. £1.

Middlesbrough.—Demolition.—And rebuilding of Fleetham-st. Elementary School, for C.B. Director of Education. Dep. £10 10s.

Northampton.—Erection.—Of 89 flats in Castle-st., for C.B. B.E. Dep. £5.

Southampton. — Erection. — Of Bassett Green Junior Elementary School, for C.B. B.E. Dep. £2 2s.

Southampton.—Alterations.—And additions to cottage at Remand Home, "Woodfield," Shirley Warren, for T.C. B.E. Dep. £1 1s.

Tetbury.—Erection.—Of 39 houses and 10 bungalows for aged persons, for R.D.C. Clerk. Dep. £2 2s.

Walsall.—Conveniences.—Adjoining Technical College, Bradford-pl., for T.C. J. Taylor, B.E. Dep. £3 3s.

OCTOBER 3.

***Cirencester.** — Erection. — Of six houses at Coates, for R.D.C. Eric Cole & Partners, F.R.I.B.A., Dyer-st. House. Dep. £1 1s.

Hunslet.—Painting.—Exterior of 182 houses at Oulton, near Leeds, for R.D.C. A. Sharpe, clerk.

Leeds.—Interior Painting.—Of dining-hall for females at North Lodge, 123, Beckett-st., for T.C. Walter Jones, Public Assistance Officer, 11, South-parade.

Leicester.—Erection.—Of branch library, Southfields-dr., Parks estate, for T.C. Symington, Prince & Pike, F. and L.R.I.B.A., 1, West-st., Museum-sq. Dep. £2 2s.

Oswestry.—Erection.—Of 2 steel and iron sheds at Smithfield cattle market, for T.C. B.E. and S.

South Ockendon.—Erection.—Of 12 staff houses at Colony for Mental Defectives, for West Ham C.B. B.E. Dep. £1.

South Ockendon. — Erection. — Of additonal accommodation at Colony for Mental Defectives for West Ham C.B. B.E. Dep. £1.

Sunderland.—Shelter.—For road vehicles consisting of a roof of mild steel framework covered with galvanised corrugated steel on south side of the warehouse at Corporation Quay, South Docks, for C.B. W. H. S. Tripp, E., River Wear Commissioners, St. Thomas-st.

Swindon.—Houses.—3, on Hurst housing estate, for T.C. B.S., 34, Regent-circus.

Twickenham. — Alterations. — And additions to Nelson School, for T.C. B.E. and S. Dep. £2 2s.

Wenlock.—Houses.—26, and sewerage works in connection therewith, at Dark-ln. housing site, Broseley, for T.C. A. J. Benberthy, A.R.I.B.A., Midland Bank-chambs., 10, Queen-sq., Wolverhampton. Dep. £2 2s.

OCTOBER 5.

***Beckenham.**—Erection.—Of cycle sheds and enclosures to verandah and covered ways at Hawes Down school, for B.C. T.C. Dep. £1 1s.

Blackpool.—Market.—In East Topping-st. and King-st., for T.C. B.S. Dep. £2.

Carrick-on-Suir.—Houses.—12 houses at Carrickbeg, for U.D.C. M. A. Veale, T.C. Dep. £3 3s.

Dumfries.—Houses.—34, at Nithside, for T.C. R. S. Osborne, B.S.

Dumfries.—Housing.—15 houses at Huntingdon, for T.C. R. S. Osborne, B.S.

***Durham.**—Additions.—And alterations to New Silksworth School, for C.C. F. Willey, F.R.I.B.A., 34, Old Elvet.

Faringdon.—Provision.—Of bathrooms to 22 houses in Station-rd., for R.D.C. J. W. Harris, Willesleigh, East Challow.

Fife. — Erection. — Of 68 houses at Crosshill, Lochore, and 84 at Rosewell, Lochore, for Fife C.C. W. Williamson & Hubbard, Royal Bank-bldgs., Kirkcaldy. Dep. £1 1s.

***Hanwell.**—Erection.—Of sports pavilion in playing fields on Drayton Manor County School in Greenford-av., for Middlesex C.C. Secretary to the Education Committee, 10, Great George-st., London, S.W.1. Dep. £2 2s.

Irthlingborough.—Erection.—Of 6 parlour type four-bedroom, and 8 non-parlour type three-bedroom houses on Allen-rd. Estate, for U.D.C. E. Turnbull, S., High-st.

Manchester.—Erection.—Of 142 flats, at Woodland-rd., Cheetham, for T.C. T.C. Dep. £2 2s.

Manchester. — Internal Painting. — At I.R.O. Sunlight House, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, W.C.1. Dep £1.

***Oswestry.**—Erection.—Of 26 houses on Llwyn Farm estate, for T.C. S. Fox-Davies, Memorial Hall. Dep. £2 2s.

Slough.—Installation.—Of electric light in 146 houses at Langley, for U.D.C. Housing Manager.

***West Ham.**—Removal.—Of galleries at various schools, for C.B. J. H. Jacues, F.R.I.B.A., 61, West Ham-la., E.15. Dep. £1.

OCTOBER 6.

***Aldershot.**—Erection.—Of mortuary in police station yard, for B.C. T.C. Deposit £1 1s.

Bairothery.—Fencing.—Ditch and mound fencing to enclose labourers' plots, for Dublin Board of Public Health. F. P. Russell, E., 6, Parnell-sq., Dublin.

Barrow-in-Furness.—Institute.—And junior instruction centre in Abbey-rd., for T.C. B.E.

Dublin.—Cottages.—85, in South County Dublin, for Board of Public Health. T. B. Byrne, E., 6, Parnell-sq. Dep. £1 1s.

Dublin.—Cottages.—21, on various sites in Balrothery district, for Board of Public Health. F. P. Russell, E., 6, Parnell-sq. Dep. £2 2s.

***Goole.**—Houses.—50 A type, on Morley-st. and Mount Pleasant sites and another site, and separate tenders for painting and electrical work, for T.C. J. H. Castle, B.E. Dep. £3 3s.

London. — Alteration. — And completion of day nursery and sun clinic in Scholefield-rd., for Islington B.C. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2. Dep. £3.

Newport (Mon.).—Erection.—Of post office garage and workshop, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Newton Abbot.—Houses.—86, for R.D.C. A. E. Smith, Housing Surveyor, Midland Bank-chambs., Union-st.

Salop. — Erection. — Of Oakengate employment exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Worcester.—Houses.—32 semi-detached three-bedroom type and 8 semi-detached four-bedroom type, also roads and sewers, at Blackpole-rd., for T.C. City E.

OCTOBER 7.

Brighton.—Houses.—18, in Carden-av., Patcham, for T.C. E. and S. Dep. £2 2s.

***Dagenham.**—Erection.—Of fire station at New Civic, for U.D.C. Clerk. Dep. £5 5s.

Huddersfield.—Demolition.—Pulling down of buildings and clearance of site of Thomas-st. clearance area, for C.B. B.E.

Leyton. — Erection. — Of employment exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Luton.—School.—For juniors and infants at Beechwood-rd., for T.C. W. H. Robinson, T.C. Dep. £5.

Monaghan.—Houses.—26, for U.D.C. Frank Gibney, architect, 16, Westmoreland-st., Dublin. Dep. £5 5s.

Northallerton. — External Repainting. — Of 44 houses, Vicar's Croft housing estate, also Isolation Hospital, caretaker's house and other buildings at Sewage Works, for U.D.C. H. Evans, Clerk.

Poole.—Erection.—Of senior school at Rossmore, Parkstone, for T.C. B.E. Dep. £5 5s.

Totnes.—Repairs.—Internal repairs and renovations, new lavatories, etc., at public assistance institution, for Devon C.C. H. V. de Courcy Hague, F.R.I.B.A., County Architect, 97, Heavitree-rd., Exeter.

***Watford.**—Erection.—Of 120 houses on Leavesden Green estate, for T.C. B.E. Dep. £2 2s.

West Drayton. — Erection. — Of telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

OCTOBER 8.

***Dartford.**—Extension.—To public library building in Market-st., for T.C. T.C. Dep. £2 2s.

Dursley. — Erection. — Of 12 houses at Wotton-under-Edge, for R.D.C. Clerk. Dep. £1 1s.

Yeovil.—Houses.—12, at Stoke-under-Ham, for R.D.C. Peter Warren, and Roydon Cooper, F/A.R.I.B.A., Old Sarum.

OCTOBER 9.

Huddersfield.—Houses.—180, on Deighton-Sheepridge housing estate, for C.B. B.E. Dep. £3 3s.

***South Petherton.**—Erection.—Of isolation hospital, for South Somerset Joint Hospital Board. Clerk, Church House, Yeovil. Deposit £3 3s.

OCTOBER 10.

***Bristol.**—Erection.—Of 86 houses on Knowle East site and 50 on Horfield site, for T.C. City E. Dep. £1.

***Lewes.**—Erection.—Of 28 houses at Winterbourne-ln., for T.C. T.S. Dep. £2 2s.

OCTOBER 12.

***Chiswick.**—Conversion.—Of marketing building and Linden House, High-rd., into fire station, with district officer's and men's quarters, for Brentford and Chiswick B.C. B.E. and S. Dep. £5 5s.

Harrow.—Operating Room.—At Isolation Hospital, Rayners-la., for U.D.C. Clerk, Council Offices, Stanmore. Dep. £1.

***Newmarket.**—Erection.—Of 32 houses and 8 bungalows, for R.D.C. S. Dep. £1 1s.

Preston.—Wiring.—At Institution, Fulwood, for T.C. B.S. Dep. £2 2s.

Standish-with-Langtree.—Houses.—116, on Avondale site, for U.D.C. S. Dep. £3 3s.

Stockport.—Shelters.—On Wellington-rd. North, at Belmont Bridge, for T.C. B.S.

Ware.—Houses.—32, at Vineyard estate, for U.D.C. R. W. Grantham, E. and S., The Priory. Dep. £2 2s.

OCTOBER 13.

***Beckenham (Kent).**—Conversion.—And extension to existing building as engine house, etc., at Shortlands pumping station, Valley-rd., for Metropolitan Water Board. Chief Engineer, 173, Rosebery-av., E.C.1. Dep. £10.

***Brentford.**—Erection.—Of 32 cottage flats on site of Holly House, Boston Manor-rd., for Brentford and Chiswick B.C. B.E. and S., Chiswick. Dep. £5 5s.

OCTOBER 14.

Carshalton. — Conveniences. — At Green-la., Rose hill, and The Wrythe recreation ground, Wrythe-la., for U.D.C. Reginald S. Davey, E. and S., Stone Court, The Grove. Dep. £2 2s.

***Chertsey.**—Erection.—Of Mortuary and other works in Fordwater-rd., for U.D.C. Clerk. Dep. £1 1s.

Crook.—Houses.—124, at Roddymoor, for North Eastern Housing Association, Ltd. George R. Smith & Partners, architects, 3, Winchester-st., South Shields. Dep. £3 3s.

***Manchester.** — Foundation Work. — At employment exchange, for H.M.O.W. H.M. Office of Works, 76, Newton-st., Manchester. Dep. £1.

***Orpington.**—Internal.—And external decorating, repairs, etc., to certain houses, for U.D.C. C. E. Pascoe.

***Portsmouth.** — Alterations. — And additions to Omega-st. school, for T.C. Adrien J. Sharp, L.R.I.B.A. Dep. £2 2s.

***Southend-on-Sea.**—Erection.—Of secondary school on Earls Hall site, for C.B. F. W. Smith, architect, Municipal-bldgs. Dep. £2.

OCTOBER 15.

***West Ham.**—Construction.—Of open-air bath, etc., at Beckton-rd. dressing rooms, Canning Town, for C.B. B.E. Dep. £1.

OCTOBER 17.

Bebington.—Conveniences.—At Bromborough, for U.D.C. L. Birch, E. and S., Brackenwood, Higher Bebington. Dep. £1 1s.

OCTOBER 19.

Epsom and Ewell. — Construction. — Of 2 new entrances, and alterations to Ashley-rd. Lodge at Cemetery, Epsom, for U.D.C. N. Auty, E. and S., Town Hall, The Parade, Epsom. Dep. £1 1s. each contract.

Great Crosby.—Lavatories.—At playing fields, off Moorside-rd., for U.D.C. Joseph A. Wright, S., Town Hall. Dep. £1 1s.

London.—Erection.—Of workshops and central garage at Limehouse, for Stepney B.C. B.E. and S., Raine-st., E.1. Dep. £10.

Rothwell, Yorks.—Houses.—9, at Lofthouse housing estate, for U.D.C. F. Hartley, Council Offices, Rothwell, nr. Leeds.

Seaton Valley.—Alterations.—To 10 "Dorlonco" type houses on Castle-pk. housing estate, Backworth, for U.D.C. S., Shiremoor. Dep. £2 2s.

***Watford.**—Erection.—Of analytical laboratory, etc., at Building Research Station, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

OCTOBER 20.

***Dagenham.**—Construction.—Of open-air swimming bath and erection of administrative buildings and other works incidental thereto, at The Leys, Old Dagenham-pk., for U.D.C. F. C. Lloyd, E. and S. Dep. £5 5s.

OCTOBER 22.

Malvern.—Extension.—Of public library, Graham-rd., for U.D.C. Clerk. Dep. £1 1s.

***Watford.**—Erection.—Of Electricity Showrooms and Offices in High-st., for B.C. B.E. Dep. £2 2s.

OCTOBER 23.

***Durham.**—Erection.—Of branch library at Haverton Hill-on-Tees, for C.C. F. Willey, F.R.I.B.A.

OCTOBER 26.

***Bournemouth.**—Erection.—Of secondary school for boys at East Way, for C.B. B.E. Dep. £3 3s.

NO DATE.

Helensbugh.—Houses.—35, of three, four and five apartments in three-story tenements, at Alma-pl., for T.C. T.C. Dep. £2.

Plymouth.—Alterations.—And additions to 22, Buckingham-pl., Millbay-rd. L. F. Vanstone, L.R.I.B.A., 2, Buckland-ter.

MATERIALS, etc.

SEPTEMBER 28.

Lymington.—Tube.—550 yds. lin. of 15 in. concrete tube, for T.C. B.E.

Walsall.—Bricks.—For T.C. A. C. Dancer, Repairs Manager, Housing Repairs Depot, Lord-st.

SEPTEMBER 29.

Plymouth.—Plain Concrete Sewer Tubes.—For T.C. City E.

SEPTEMBER 30.

Ilkeston.—Limestone Kerbing.—For T.C. B.E.

Wilts.—Road Materials.—For C.C. H. S. Ganderton, C.S., Trowbridge.

OCTOBER 1.

Birmingham.—Gravel.—For T.C. H. J. Manzoni, City E. and S.

OCTOBER 3.

Barnet.—Granite Kerb.—And setts, for U.D.C. S.

OCTOBER 5.

Hertford.—Broken Granite.—For T.C. B.S.

OCTOBER 7.

Clacton.—Concrete Paving Flags.—For U.D.C. W. Aiston.

OCTOBER 8.

Southend-on-Sea.—Concrete Tubes.—For T.C. Robert H. Dyer, B.E. and S. Dep. £1.

OCTOBER 19.

Chatham.—Granite Kerb.—For T.C. R. L. Honey, F.S.I., B.E. and S.

ENGINEERING, IRON AND STEEL.

SEPTEMBER 28.

Irvine.—Construction.—Of reservoir at Greenhead filter station, Stevenston, for District Water Board. F. A. Macdonald & Partners (Glasgow), Ltd., 135, Wellington-st., Glasgow, C.2. Dep. £10.

Norfolk.—Installation.—Of two Cornish boilers, etc., at Little Plumstead Colony, for C.C. Consulting Engineer. Dep. £3 3s.

SEPTEMBER 29.

Fife.—Tanks.—Sewage tanks, separators, filters, road of access, fencing, piping and other relative works, for Fife Joint Asylum Committee. H. F. Hodge, C.E., 34, Viewfield-terr., Dunfermline. Dep. £2 2s.

Kilmarnock.—Widening.—Of west side of Riccarton bridge over River Irvine, and widening of pavement on north approach to bridge, for T.C. B.S. Dep. £1 1s.

Kincardine.—Widening.—Of existing bridge and approaches at Bridge of Leppie, nr. Fordoun Station, for T.C. John Falconer, clerk, Stonehaven. Dep. £1 1s.

South Petherton.—Installation.—Of engineering services at South Somerset Isolation Hospital, for Joint Hospital Board. H. C. C. Batten, Church House, Yeovil. Dep. £3 3s.

SEPTEMBER 30.

Carmarthen.—Water Supply.—Supplying, laying and jointing 4½ miles of 4-in. dia. bitumen lined steel pipes with various fittings, together with construction of spring chambers, settling tanks and filters at source of supply, and installation of a lime saturation plant with small building at existing service reservoir, for Joint Counties Mental Hospital. J. Owen Parry & Lewis, consulting engineers, Ammanford. Dep. £3 3s.

Glamorgan.—Reconstruction.—And widening of Aberaman Bridge and approaches, for C.C. C.S., Glamorgan County Hall, Cardiff. Dep. £5.

OCTOBER 1.

Widnes.—Construction.—Of reinforced concrete reservoir at Pex Hill, for T.C. Herbert Lapworth, Partners, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

OCTOBER 2.

Holmfirth.—Rebuilding.—Demolition of part of Ford Gate Bridge, Hinchliffe Mill, and rebuilding of demolished part in reinforced concrete, for U.D.C. G. Dilnot, Clerk.

Maidstone.—Construction.—Of service reservoir, at Boxley, for Waterworks Company. C. H. Harden, E. and Manager, 74, King-st. Dep. £3 3s.

OCTOBER 6.

Croydon.—Tanks.—Insulation of six reinforced concrete sludge digestion tanks, at Beddington Sewage Purification Works, for C.B. B.E. Dep. £1 1s

Warwickshire.—Construction.—Of Coleshill By-pass bridges and widening, strengthening and reconstruction of canal bridges, for C.C. L. Edgar Stephens, clerk, Shire Hall, Warwick. Dep. £5 each contract.

OCTOBER 9.

Ogwen.—Intake works.—At Marchlyn Mawr Lake, for R.D.C. Chas. F. Farrington, M.Inst.C.E., Trinity-sq., Llandudno. Dep. £5 5s.

OCTOBER 12.

South Africa.—Steelwork.—For new station at Mayfair and Germiston-Elandsfontein deviation road bridge to carry main reef road over Pretoria lines at new Driefontein station, for South African Railways and Harbours Administration. Chief Stores Superintendent, Park Station-chambs., Rissik-st., Johannesburg.

ROAD, SEWERAGE AND WATER WORKS.

SEPTEMBER 28.

Beckenham.—Making-up.—Of Uplands, Forest Ridge, The Meadway, The Mead, Greenways, Copse-ave., and Woodland Way, for T.C. Percy Parr, E. and S., Dep. £2.

Beddington and Wallington.—Removal.—Of abandoned tramtrack and reconstruction of carriage-way of Stanley Park-rd., for U.D.C. S. F. R. Carter, E. and S., Town Hall, Wallington. Dep. £5.

Birmingham.—Repair.—Of drive to Canwell Hall, for T.C. T.C. Dep. £1 1s.

Bromley.—Levelling.—Paving, kerbing, channelling and making-good in Beechfield, Cedar and Mayfield-rds., for T.C. B.E. Dep. £1 each road.

Bromley (Kent).—Reconstruction.—In Station Approach, Hayes, and widening and reconstruction in Widmore-rd., Bromley, for T.C. Harold Cliffe, B.E. Dep. £2.

Cannock.—Provision.—And laying of single-coat asphalt footpaths in various streets, for U.D.C. Robert Blanchard, E. and S., Council House, "The Green." Dep. £2.

Glendale.—Execution.—Of scheme of water supply for Milfield, for R.D.C. D. Balfour & Sons, consulting engineers, 3, St. Nicholas-bldgs., Newcastle-on-Tyne. Dep. £3.

Malew (I.O.M.).—Construction.—Of main drainage scheme for Derbyhaven district, for Commissioners. A. J. Davidson, Talbot-chambs., 16-18, Athol-st., Douglas, I.O.M. Dep. £2 2s.

Ross-on-Wye.—Construction.—Of stoneware pipe sewers, manholes, etc., for U.D.C. C. H. Caddick, S., Council-chambs. Dep. £2 2s.

Seaham Harbour.—Pipes.—900 yds. of unreinforced concrete pipes ranging from 15 in. to 24 in. in diameter, for U.D.C. S.

Sunderland.—Roads.—Sewering, levelling, paving, metalling, flagging, channelling, etc., of Garcia-terr., from north side of Atkinson-rd. to a point 6 yds. north of Hugh-st.; Mitford-st., from Sea-rd. to north back Sea-rd.; North Back Sea-rd., from Thorburn-st. to Laindon-av.; Winifred-st., from Browne-rd. to Atkinson-rd.; South Back Southwick-rd., and North Back Wreath Quay-rd., from Black-rd. for distance of 11 yds. or thereabouts in easterly direction, for C.B. B.E. Dep. £2 2s.

SEPTEMBER 29.

Bridgwater.—Sewerage Works.—In various parts of district, for T.C. B.E. Dep. £2 2s.

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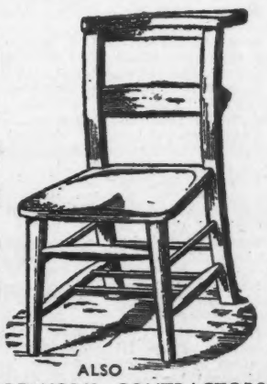

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Cupar (Fife).—Construction.—Of sewage tanks, separators, filters, road of access, fencing, piping and other relative works, for Fife Joint Asylum Committee. H. F. Hodge, C.E., County Offices, 34, Viewfield-terr., Dunfermline. Dep. £2 2s.

Hazel Grove.—Widening.—Of Chester-rd., for the Hazel Grove and Bramhall U.D.C. S., London-rd. Dep. £2.

Peterborough.—Laying.—Of 39-in. storm overflow sewer in Bridge-st., for T.C. City E. Dep. £2 2s.

Tralee.—Construction.—Of sewerage works at Edward-st., Oakview-rd. and Garryruth, and laying of water mains at Edward-st., for the U.D.C. C. T. Kennedy, clerk, Urban Council-chambs. Dep. £10.

Wetherby.—Providing.—And laying of spun-iron pipes and wrought-iron pipes, with construction of small covered service reservoir, pump-house and contingent works for Kearby-with-Netherby water supply, for R.D.C. F. J. Rodwell & Son, consulting engineers, 20, Park-row, Leeds. Dep. £2 2s.

SEPTEMBER 30.

Banstead.—Construction.—And making-up and surface-water drainage in Nork Way (part), Roundwood Way (part) and Roundwood View, for U.D.C. Dep. £1.

Carlisle.—Construction.—Of three roads, for T.C. City E.

Carmarthen.—Supplying.—Laying and jointing of bitumen lined steel pipes, with various fittings, and other works, for Committee of Visitors of Joint Counties Mental Hospital. J. Owen Parry & Lewis, consulting engineers, Ammanford. Dep. £3 3s.

Liverpool.—Preparing.—And tar asphalting surface of playground in Wavertree Park, for T.C. Land Steward and S.

Luton.—Construction.—Of various roads, for T.C J. W. Tomlinson, B.E. and S., 12, Upper George-st. Dep. £6 6s.

Portslade-by-Sea.—Extending.—Existing surface-water outfall in Shoreham Harbour, for U.D.C. D. V. Howard, S., Council Offices, Station-rd. Dep. £1 1s.

Wandsworth.—Paving.—Of Skeena Hill, Southfields, and Stag-la., Roehampton, for B.C. B.E., 215, Balham High-rd., S.W.17. Dep. £1 1s.

OCTOBER 1.

Cardiff.—Improvement Works.—In Windsor-av. (part of), Radyr, for R.D.C. W. Farrow, E. and S., Park House, Park-pl.

Ealing.—Making-up.—Of Corringway, Ealing; Hill-rise, Greenford; and accommodation road at rear of 6-24, Boston-parade, Boston-rd., Hanwell, for T.C. F. J. Forty, B.E., Town Hall, Ealing, W.5. Dep. £1.

Gateshead-on-Tyne.—Construction.—Of roads, drainage, etc., and other work in connection with Team Valley Estate, for North Eastern Trading Estates, Ltd. Consulting engineers, Sir Alexander Gibb & Partners, 4th Floor, Metrovick House, Northumberland-rd., Newcastle-upon-Tyne. Dep. £5 5s.

Rishton.—Construction.—Of 890 yds. of sewers and surface-water drains, with manholes, etc., for U.D.C. C. J. Lomax & Son, engineers, 37, Cross-st., Manchester, 2. Dep. £2 2s.

OCTOBER 2.

Caithness.—Reconstruction.—Of Ord of Caithness-Wick-rd. from Latheron to Dunbeath, length of approx. 4 miles, for C.C. County Road S., Wick, Caithness. Dep. £3 3s.

Carlisle.—Construction.—Of roads and sewers at Upperby Housing Estate, for T.C. City E., 18, Fisher-st. Dep. £1 1s.

Carmarthen.—Construction.—Of glazed stoneware foul-water sewer at Caegwyn-terr., Drefach, together with manholes and other works incidental thereto, for R.D.C. W. E. Jones, engineer, 15, Spilman-st.

Consett.—Laying.—Of reinforced concrete, drains and other works for making-up of Back Edith-st., for U.D.C. T. Hutton, S.

Hartley Wintney.—Joining-up.—Of certain lengths of old main with new main, for R.D.C. Major W. H. Bateman, Consulting Civil E., Batheaston, Bath.

Hornsey.—Paving.—And kerbing Twyford-ave. and Denewood-rd., for T.C. W. H. Adams, B.E. and S., Town Hall, Crouch End, N.8.

Inverness.—Making-up.—Of new roads and footpaths, laying of sewers and other services, in connection with housing scheme at Kessock Park site, for T.C. Alex. F. Mackenzie, B.S.

South Westmorland.—Providing.—And laying of cast-iron concrete-lined water main in Dalton and Burton, for R.D.C. Water E., 17, Lowther-st., Kendal. Dep. £2 2s.

OCTOBER 3.

Bagshot.—Construction.—Of stoneware pipe sewers, together with manholes and other appurtenant work, in Windlesham, for R.D.C. E., Council Offices, High-st., Bagshot. Dep. £2 2s.

OCTOBER 5.

Chipping Norton.—Laying.—Of cast-iron water mains, construction of reservoir, engine house and appurtenant works, for Steeple Barton and Westcot Barton water supply, for R.D.C. W. H. Bateman, E., Batheaston, Bath. Dep. £2 2s.

Cranbrook.—Extending.—Main sewer in Back-rd., Sandhurst, for R.D.C J .H. Bailey, "Penryn."

Eastbourne.—Construction.—Of glazed stoneware pipe sewer and concrete pipe surface-water sewer, with manholes, etc., for T.C. B.E.

Formby.—Drainage Works.—In Barkfield-ave, for U.D.C. E. Kendrick Gollan, E. and S.

Kidderminster.—Construction.—Of cast-iron pipe water main and provision of fittings, with other contingent works, for Drakelow and Hobro water supply, for R.D.C. Fiddian & Deeley, engineers, 13, Church-st., Stourbridge. Dep. £3 3s.

Kingswood.—Street Improvements Works.—For U.D.C. S. Dep. £2 2s.

Meriden. — Construction. — Of stoneware pipe sewers, with manholes and other incidental works, in Birmingham-rd. and Old Chester-rd., Coleshill, for R.D.C. H. Pickering, E. and S. Dep. £2 2s.

Stourbridge.—Construction.—Of about 940 yds. of 18-in. and 15-in. concrete pipe sewer from Enville-st. to Cemetery-rd., for Main Drainage Board. Geo. Plant Deeley, E., 13, Church-st. Dep. £2 2s.

Whitstable.—Making-up.—Of two roads, for U.D.C. G. Dunkin, S. and Water E.

OCTOBER 6.

Aldershot.—Making-up.—Of two streets, for T.C. James Neave, B.E. and S. Dep. £1 1s.

Carmarthenshire.—Improvement.—At Cana Chapel, Pass By, for C.C. T. W. Wishlade, C.S., The Castle, Carmarthen. Dep. £5.

Chislehurst and Sidcup.—Making-up.—Of Westwood-ln, Sidcup, for U.D.C. Edgar Lawes, E. and S., Council Offices, Main-rd., Sidcup. Dep. £1 1s.

Hertford.—Water Supply Works.—For T.C. D. Balfour & Sons, consulting engineers, 47, Victoria-st., Westminster, S.W.1. Dep. £5.

Margate.—Construction.—Of new roads and sewers on Northdown estate, for T.C. E. C. Harris & Partners, quantity surveyors, 3, Bedford-sq., London, W.C.1. Dep. £2 2s.

OCTOBER 7.

Carlisle.—Laying.—Of sewers in Denton Holme, Currock, Upperby and Caldew Valley areas, and construction of pumping station, for T.C. City E., 18, Fisher-st. Dep. £3 3s.

Dunstable.—Construction.—Of stoneware pipe sewer, with manholes, in London-rd., for T.C. Wm. F. Wilkins, B.E. and S. Dep. £1 1s.

Horndean.—Kerbing.—Channelling and making-up of Drill Hall-rd. and St. Annes-rd., for Petersfield R.D.C., acting as agents for Southampton C.C. S. F. Warren, Road S. Dep. £1 1s.

Leicestershire.—Reconstruction.—Of London-Carlisle-rd., for C.C. C.S., County Offices, Grey Friars, Leicester. Dep. £5.

OCTOBER 8.

Manchester. — Sewering. — Draining, excavating, kerbing, flagging and paving of various roads, for T.C. City E. Dep. £2 2s.

Scarborough.—Reconstruction.—Of Vernon-rd. and reconstruction of sewer, for T.C. J. Paton Watson, B. and Water E. Dep. £1 1s.

OCTOBER 9.

Ogwen. — Construction. — Of intake works at Marchlyn Mawr Lake, for R.D.C. Chas. F. Farrington, Trinity-sq., Llandudno. Dep. £5 5s.

OCTOBER 10.

Argyll.—Road.—Contract No. 1, for Tyndrum-Oban road—route A. 85 (pass of Brander-Dail-namac section), length, 6.8 miles, for C.C. D. Smith, Duncan C. MacTavish, County Clerks, Lochgilphead. Dep. £3 3s.

Eccles.—Construction.—Of Winton outfall sewer, for T.C. T. Elce, B.E. Dep. £2 2s.

Louth.—Construction.—Of sewerage system for Dunleer, for Board of Health. J. F. McGahon & Son, architects, Exchange-bldgs., Dundalk. Dep. £5 5s.

Whitefield.—Reconstruction.—Of Bleakley, Thorp and Livsey-sts., for U.D.C. J. Knight, S., Town Hall. Dep. £1 1s.

Public Appointments.

SEPTEMBER 30.

***Cardiff.**—Assistant Lecturer in Welsh School of Architecture.—For T.C. Director of Education.

***Worthing.**—Clerk of Works.—For T.C. T.C.

OCTOBER 1.

***Bournemouth.**—Two Architectural Assistants.—For C.B. B.E.

OCTOBER 2.

Breconshire.—Architectural Assistant (Temp.).—For C.C. Clerk.

Chelmsford. — Senior Architectural Assistant; Architectural Assistant.—For Essex C.C. J. Stuart, F.R.I.B.A.

London.—Manager for Building Works Dept., Royal Gunpowder and Small Arms Factories, Waltham and Enfield.—For War Office. Under-Secretary of State (C.5).

OCTOBER 3.

***Derby.**—Builders' Estimating Surveyor.—For C.B. A. Sheard, Building Works Depot, Osmaston-rd.

Northallerton.—Junior Architectural Assistant (Temp.).—For North Riding of Yorkshire C.C. Clerk.

OCTOBER 5.

***Newcastle-upon-Tyne.**—Architectural Assistant (Temp.).—For E.C. Director of Education.

OCTOBER 6.

***Gillingham.**—Clerk of Works.—For Kent E.C. T.C.

***Swansea.**—Assistant Quantity Surveyor.—For C.B. T.C.

OCTOBER 10.

***Blackburn.**—Three Architectural Assistants and one Assistant Quantity Surveyor.—For C.B. B. and Water Engineer.

***Norwich.**—Two Architectural Assistants (Temp). —For T.C. City Engineer.

NO DATE.

***London.**—Assistant Civil Engineers (Temp.).—For Air Ministry. Secretary (W.B.9). Room 712, Adastral House.

***London.**—Heating Assistants (Temp.).—For Air Ministry. Secretary (W.B.9). Adastral House.

***London.**—Surveyor's Clerks, Clerks of Works, Architectural and Engineering Assistants, and Assistant Quantity Surveyors.—For Air Ministry. Secretary (W.B.9), Adastral House.

***York.**—Mechanical Draughtsman.—Chief Engineer, Northern Command.

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; B.S. for Borough Surveyor; B.E. for Borough Engineer; D.S. for District Surveyor; C. for Clerk; T.C. for Town Clerk; C.E. for County Engineer; C.S. for County Surveyor; S. for Surveyor; E. for Engineer.

Abram.—M.H. approved 50 houses by Council to relieve overcrowding.

Adwick-le-Street.—U.D.C. proposes 40 houses at Carcroft, and 40 at Adwick for aged persons.

Baildon.—Council decided to erect filter house on Baildon Moor, opposite club-house of golf club.

Barnsley.—British Co-operative Society, Ltd., to erect branch stores at Staincross with frontage to main Wakefield-rd. Plans by society's architect. Tenders to be invited.

Billingham.—Rev. J. R. Trotter made gift of £4,000 towards cost of enlarging Billingham Parish Church. Scheme provides for vestries and to double present accommodation, which is 300. Cost, £8,500. Architect, G. E. Charlewood, of Newcastle.

Birmingham.—Hotel, seven storeys high, to be built on site, corner of Suffolk-st. and Seven-st., for company, of which L. M. Heller, Victoria House, Southampton-row, London, W.C.1, is managing director. A. W. Ames & Son, London, architects.—Hurst & Beamish, builders, of Hampton-in-Arden, Birmingham, propose eight shops with living accommodation, corner of Sheaf-la. and Coventry-rd., Sheldon.—A. J. White & Styles, architects, Lombard House, Gt. Charles-st., preparing plans for shopping centre, Bristol-rd. South, Northfield, for Arnold Silverstone & Co., auctioneers and estate agents, Burlington-chambs., 118, New-st. Contracts not let.

Birmingham.—Co-operative Society purchased land in Clay-la., Acock's Green, as site for second laundry.

Blackburn.—Plans almost complete for erection of baths costing £82,000 in Nab-la.

Blackpool.—Co-operative Society, Ltd., Sheppard-st., propose premises for shops, Newhouse-rd. Plans by Halstead Best, architect, 20, Clifton-st. Contracts not let.

Blyth.—Miners at Cambois Colliery decided in favour of pit-head baths. Plans will be prepared by F. G. Fuzzell, Miners' Welfare Dept., Dean Stanley-st,. London.

Borden.—Parochial Church Council decided to ask Francis Grant, Diocesan Architect, to prepare specifications and to ask for tenders for work of restoration of the church tower.

Bradford.—City Council approved extension of Lister-pk. open-air baths, at £19,800.

Bray.—U.D.C. approved plans and estimates from engineer for development of sites of 169 houses in various parts of town

Caine.—T.C. proposing 40 more houses.

Cannock.—R.D.C. approved: Telephone exchange, Clay-st., Penkridge, for Post Office engineering department.

Carlisle.—Scottish Motor Traction Co., Ltd., propose £17,000 buildings on portion of Old Jail site, with connecting bridge. Architect, S. W. B. Jack, 35, Warwick-rd.

Castleford.—U.D.C. negotiating for acquisition of land in Healdfield-rd. for dwellings for aged people. —Council decided upon extension of public baths.

Chester.—T.C. approved plans by City S. for school at Newton, at £23,538.—M.H. approved application for £39,236 for works of sewerage in parish of Blacon.—Plans passed: 24 houses at Broadway, Blacon, T. B. Gorst & Sons.

Chester.—T.C. to build sub-station in Upton and Hoole Village.

Chester-le-Street.—R.D.C. received sanction to site for Council offices. M. Wilson, Council Offices, Chester-le-Street, architect.

Coalville.—U.D.C. approved plans of new building estate off Cademan-st., Whitwick, on which A. W. Tunnicliffe proposes 28 houses.

Cookstown.—Guardians decided to proceed with conversion of disused workhouse building into district hospital. Cost, £5,500.

Coventry.—Hattrell & Wortley, architects, 1, Queen's-rd., to prepare plans for factory, for Modern Machine Tools, Ltd., The Butts, on site in Hollyhead-rd.

Darlaston.—Modernisation scheme costing £200,000 to be undertaken at their works by Rubery, Owen & Co.

Darwen.—E.C. propose extensions to Avondale-rd. senior girls' school. Plans by E. Marsden, B.E. Cost £11,000.

Dawley.—U.D.C. propose 100 more houses. Architect, J. T. Hickman, Wellington.—Council to acquire 7½ acres of land near King-st. site for 64 additional houses.

Droitwich.—Alderman C. H. Everton, proposes to develop housing estates at St. Peter's-cres. and Pridzor-rd.

Dukinfield.—U.D.C. applying to M.H. for £24,921 for houses on Birch-la. site.

Dungannon.—B. of G. received Ministry sanction to reconstruction of workhouse. Messrs. Taggart, of Belfast, architects.

Durham.—M.H. approved purchase of housing sites by R.D.C. at Broom-la., Ludworth and Shincliffe.—Council also proposing land for houses at Gilesgate Moor and Ushaw Moor.

East Ham.—C. B. approved:—Alterations: 236-40, Barking-rd., A. Foreman.—Council appointed E. Wingfield-Bowles & Partners as consulting heating engineers for proposed offices and clinic accommodation in Barking-rd.

Exeter.—Devon Standing Joint Committee approved £1,000 on improving judges' lodgings.

Gateshead.—Sanction received by T.C. to £2,690 for conversion of "Bloomfield" into a girls' junior instruction centre.—Detailed plans prepared by B.E., for maternity and child welfare centre, at £6,000.—Premises to be erected in South Shore-rd., by Northumberland Press, Ltd., Waterloo-st., Newcastle-on-Tyne. Architects, Marshall & Tweedy, FF.R.I.B.A., 129, Pilgrim-st., Newcastle-on-Tyne.

Guiseley.—West Riding E.C. to erect infants' school to accommodate 250. Plans by H. Wormald, Education Architect, Wakefield. Tenders will be invited.

Halstead.—U.D.C. approved: Showroom, workshop and store on Chapel Hill, Barnard & Johnson.

Harpenden.—U.D.C. passed: Stores, High-st., F. W. Woolworth & Co., Ltd.; extensions, National Children's Home; St. George's School.

Haverton Hill-on-Tees. — Davy Bros., Ltd., engineers, Sheffield, taken over works of British Chilled Roll & Engineering Co., and they propose to make extensions to buildings. H. B. Toy, consulting manager and engineer.

Hebburn-on-Tyne.—T. A. Page, Son & Bradbury, architects, 67, King-st., South Shields, prepared plans for 130 houses, for the North-Eastern Housing Association, Northumberland-rd., Newcastle-on-Tyne.—Extensions proposed to "Tenants Arms" Hotel, for Wilkinson & Co., 225, Westgate-rd., Newcastle-on-Tyne. Architects, Page, Son & Bradbury, 67, King-st., South Shields.—Additions to New Town Works to be made by A. Reyrolle & Co., Ltd. Architects, Cackett, Burns-Dick & MacKellar, 21, Ellison-pl., Newcastle-on-Tyne.—U.D.C. informed that Special Areas Commissioner is willing to consider giving grants towards conveniences, and to prepare plans for work at Prince Consort-rd., Harvey-st., Lyon-st., corner of Whickham-rd., Campbell Park and Hospital Approach.

Hinckley.—U.D.C. received M.H. permission to invite tenders for 40 houses on Jericho Farm estate.

Hurstpierpoint.—Mid-Sussex Joint Hospital Board approved plans for alterations to Dean's Farm Isolation Hospital, at £7,585.

Ilfracombe.—Council to apply to the Ministry of Health for permission to borrow £15,000 for the construction of an orchestral hall. Subject to the Ministry's approval both wings attached to the Victoria Pavilion on the front will be demolished and replaced.

Irlam.—Lancashire E.C. propose elementary infants' school, Fidler's-la. County Architect, Stephen Wilkinson, F.R.I.B.A., Preston.

Kidderminster.—R.D.C. approved plans for 54 houses. Plans by Pritchard, Godwin & Clist, architects, Bank-chambs.

Leeds.—Plans to build 68 flats in Camp Field area to be considered in near future by T.C. Housing Director (R. A. H. Livett) prepared lay-out.

Leicester.—Hill, Sandy & Norris, architects, 9, Albert-sq., Manchester, to prepare plans for Church of Blessed Sacrament, The Oval, Braunstone.

Leighton Buzzard.—Rev. C. Henslow, P.P. Sacred Heart, Beaudesert, propose extensions to church.

Liverpool.—Tenders to be invited for £14,000 hotel to be known as "Yewtree" at West Derby, for Greenall, Whitley & Co., Ltd., Wilderspool Brewery, Warrington. Architects, Edmund Kirby & Sons, 5, Cook-st.—Alterations to be carried out at Garston Technical Institute.

London (Lewisham).—B.C. approved:—E. W. Ashton, erect Maryville-court, Belmont-gr.; A. J. Horsfield, flats, adjoining 8, Brockley View, Forest Hill; Wates (Streatham), Ltd., houses, Bellingham Station estate, Bromley-rd., Catford; L. A. Cullifford, houses, Beckenham-ln. estate, Lewisham; Hugh Macintosh, 29 houses, Tewkesbury-av., Forest Hill; G. E. Clare & Son, flats and garages, rear 120, Canobie-rd., Forest Hill; Territorial Army and Air Force Association, vehicle sheds, Hollyhedge House, Blackheath; extension, rear of Kingslorworks, Herschell-rd., Forest Hill; Wates (Streatham), Ltd., houses, abutting on Verdant-ln., Catford; F. Braby & Co., Ltd., extension of building at Catford Motor Body works, Catford Hill; B. G. Utting, lay-out of site of St. Mildred's-rd., Lee; J. P. Briggs, addition to printing works, corner of Lee-ter. and Lawn-ter., Blackheath; Bickley Co., Ltd., additions, Forest Hill tennis club pavilion; Maisonettes Construction Co., Ltd., houses, Southend-ln.—Council approved number of clearance schemes in Elmira-st., Sparta-st. and Southbrook-mews, Lee.

Long Ashton.—District Council to purchase three acres of land at Archgrove, Long Ashton, at £250 per acre, for houses.

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* See also List of Contracts open.

***** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

Lowestoft.—T.C. approved: Co-operative Wholesale Society, Ltd., for canteen and club, Riversiderd works; C. Hadenham, amended lay-out of buildings estate, Grove Farm, Pakefield; F. W. Woolworth & Co., Ltd., extension to store, London-rd. North.

Manchester.—W. Johnson & Son, 26, Oldham-rd., Miles Platting, architects for rebuilding "Friendship Inn," 294, Hyde-rd., Gorton, for W. T. Rothwell, Ltd., Heath Brewery, Newton Heath.

Market Drayton.—U.D.C. propose development of land at Shrewsbury-rd. for housing site. Plans by W. L. Hind, architect, Trinity-bldgs., Hanley.

Newcastle.—T.C. sanctioned drainage of Denton Valley, at £127,000; 335 new houses on Pottery Bank Estate, £125,633; 200 two-roomed bungalows for aged people, £67,035; reconstruction of Chillingham-rd. bridge, £24,768.

Newcastle-on-Tyne.—City Council contemplating small extensions to municipal buildings.—It is proposed to make extensions to bottling stores of Federated Breweries in Hanover-sq. Dixon & Son, 1, Collingwood-st., architects.

Newport (Mon).—Royal Gwent Hospital to be enlarged.

Normanton.—West Riding E.C. propose senior school at Coronation Valley, Altofts, near Normanton. Education Architect, H. Wormald, A.R.I.B.A., Wakefield.

Northallerton.—U.D.C. given notice of its intention to erect conveniences north of Market-cross in Market-pl. Plans by S.

Northampton.—Proposals involving £5,000 for alterations at Cattle Market to be submitted to T.C.

North Shields.—Tyne Improvement Commissioners approved proposal to clear Albert Edward Dock estate to make it available for industrial site.

Norwich.—T.C. adopted recommendation that present building scheme for new municipal offices be extended to include erection of tower at St. Giles'-st. end of building in accordance with plans by architects, C. H. James and S. Rowland Pierce, at additional cost of £7,913.—Council propose 358 flats.

Oldham.—John Smith's Tadcaster Brewery, Ltd., proposes reconstruction of "Moulders Arms" Inn, Milnrow-rd., Shaw, at £2,000.

Plymouth.—Under a five-year programme Corporation is building nearly 2,000 houses.

Pontardawe.—Council recommend purchase of 2 acres of land between Craig-rd. and Glynmeirch-rd., Trebanos, for housing. R. D. Jones, architect.

Redcar.—T.C. to buy premises in High-st. for conversion into gas showroom.

Rochdale.—Board of Management of Rochdale Infirmary and Dispensary, Whitehall-st., propose casualty and massage departments as additions to institution. Butterworth & Duncan, architects, 2, Baillie-st. Tenders to be invited.

Ryde.—T.C. approved: Alterations and additions, Royal I.W. County Hospital, Swanmore-rd.

St. Leonards.—Theatre Royal to be altered, at £1,400.

Saltash.—T.C. received M.H. sanction to £5,000 for housing at Warfelton.

Scarborough.—Report embodying proposals for Winter Garden, combined with extensive car park, to cost £60,000, submitted to T.C. It is proposed that Valley Gardens should be utilised for distance of 800 ft., between entrance and Valley Bridge.

Sheffield.—Miners' Welfare Central Fund Committee propose pithead baths at Waleswood Colliery. Plans by J. H. Forshaw, F.R.I.B.A., Architects' Department, Mines Section, Romney House, Marsham-st., London, S.W.1.—Fowler & Marshall, architects, Hartshead, are preparing plans for development of land for houses in Newfield-la. and Causeway Head-rd., also a shopping site in Handsworth-rd., Bowstead estate.

Southampton.—C.B. approved:—W. H. Masters, for T. Clark & Son, Ltd., 185 houses, Cornwall-rd., Wakefield-rd., Wycliffe-rd., Bromley-rd. and Litchfield-rd.; Gutteridge & Gutteridge, for University College, physics laboratories, etc., University College, University-rd.; J. D. Buck, motor showrooms, petrol filling station, café, etc., Hill-ln., Winchester-rd. and Burgess-rd.; G. A. Jackson, shops and offices, East Bargate and Hanover Buildings.

Southampton.—Corporation required to abate overcrowding 353 houses, but it is only possible to provide for 351 houses after an area has been allocated for community centre.

Southend.—Highways and Works Committee offered no objection to proposal that portion of land attached to Jordan's Cottage, Sutton-rd., be transferred to Committee for one-story cottages for aged persons.

Southend-on-Sea.—C.B. approved:—Extension to premises and 7 lock-up garages, 686, London-rd., Chalkwell Car Exchange; 8 shops and houses and 20 houses, Rayleigh-rd., Eastwood, Mrs. M. E. Rolls.

South Kirby.—Tenders to be invited for pithead baths and canteen at collieries for Mines Welfare Dept. Plans by J. H. Forshaw, architect, Romney House, Marsham-st., Westminster, S.W.1.

South Shields.—Negotiations been completed by T.C. for site at Little Horsley Hill for 600 houses. John Reid, B.E.

Spalding.—R.D.C. proposing 56 houses, with additional 46 when land becomes available.

Stamford.—T.C. passed plans for another 83 houses on Little Casterton-rd. and for lay-out for 142 houses on Ryhall-rd. drift site.

Stockton-on-Tees.—G. Hope, builder, "Montrose," Hartburn-av., to develop 7 acres of land near Oxbridge-av. Plans by G. P. Stainsby, 25, High-st.—Pickerings, Ltd., to extend offices in Beaumont-st.—Scouts' assembly hall to be erected in Britannia-terr. to plans by T. E. Dobson, 44, Wellington-st.

Sunderland.—Plans prepared by T.C. for obtaining tenders for 20 houses, Ford estate, and 10, High Southwick estate. Plans by B.E.—No opposition has been offered by the Finance Committee to purchase of 47 acres of land at Hylton-la. for housing.—H.M.O.W. acquired site between Hudson-rd. and Borough-rd., for employment exchange.—T.C. approved £52,000 for sewer schemes, including an outfall sewer at Seaburn, at £38,550.

Sunderland.—Sunderland and Durham County Eye Infirmary received offer from Sir John Priestman of £50,000 towards cost of building a new institution.

Taunton.—Starkey, Knight & Ford, brewers, granted lease by Corporation of site for a public-house at Halcon housing estate.

Taunton.—T.C. approved:—Extensions to factory, Queen-st., Harding, Tilton & Hartley, Ltd.

Torquay.—Cadewell House, with extensive grounds, been purchased by John Lloyd, builder, of Torquay, for building development.

Uttoxeter.—J. Joules & Sons, brewers, Stone, propose alterations to "Three Tuns Inn." Plans by Staff Architect, J. S. Redman, The Brewery, Stone. Contracts not let.

Wallsend.—Tyne Improvement Commissioners approved proposal to construct 650-ft. quay at Willington Quay, at £17,500, for use of plywood factory.

Wakefield.—R.D.C. propose houses as follows:—Crigglestone 37, Crofton 18, Kirkhamgate 6, Sharlston 20, Middlestown 32, Netherton 4, Walton 11, Warmfield 4, West Bretton 2.

Wakefield.—R.D.C. approved plans for parochial hall and classrooms, Main-st., Crofton, for Vicar and Parochial Council, Parish Church.

Washington.—Consideration being given by U.D.C. to scheme for 64 "A4" type houses to relieve overcrowding.

Wath-on-Dearne.—U.D.C. propose 80 houses at Hollowgate, West Melton.

Wednesbury.—Factory premises to be built in Hollyhead-rd., for Newman's Tubes, Ltd.

Wellingborough.—U.D.C. to erect 72 houses at Finedon.

Wells (Norfolk).—M.H. sanction, U.D.C. decided to borrow £4,144 for houses in Westfield-av.

Wells (Som.).—City Council to build 24 more houses.

Welshpool.—T.C. considering 36 houses by W. Sorrill, builder.

Whaley Bridge.—Rev. N. H. C. Renner and Parochial Council of Taxal Parish Church propose church hall, at £1,400.

Wigton.—Alterations and lock-up garages to be carried out at Victoria Hotel, for Jenning Bros., Ltd. Tenders invited. Plans by J. J. Davison, Sandford Fawcett & Partners, King-st.

Wimbledon.—Corporation approved land unit plan by Hampton & Sons, Ltd., for site north-east side of Burghley-rd. between Church-rd. and Marryat-rd. and vacant land adjoining.—Plans approved for 30 flats at 55, Richmond-rd., and 36 flats and 20 garages at "The Brambles," Woodside.

Wimborne.—U.D.C. approved plans for building of tower on St. Catherine's Roman Catholic Church.

Wolverhampton.—Board of Management of Wolverhampton and Midland Counties Eye Infirmary, propose £20,000 extensions to buildings.

Worcester.—Alfred Parker, architect, of The Avenue, The Cross, Worcester, prepared plans for extensions to Christopher Whitehead school, Malvern-rd.

Worksop.—T.C. approved plans for shops and houses in Carlton-rd., for Worksop Co-operative Society, Ltd.—Housing Committee propose 28 houses, Lincoln-st. area; to acquire 10½ acres of land at Bracebridge for housing.—T.C. propose bandstand in Memorial-av.

Yarmouth.—B.E. to prepare plans for 30 houses on land in Lawn-av. to be acquired.—B.E. to prepare also plans for bridge over railway in Jellicoe-rd. Cost, £14,000.—Plans passed: Additions to premises, 3-7, King-st., Marks & Spencer, Ltd.; warehouse, Beccles-rd., A. Hollis.

York.—Corporation to carry out reconstruction of Skeldergate Bridge at £8,550. Tenders to be invited.

York.—T.C. approved:—Heworth Home Builders, Ltd., 22 houses, Heworth Homes estate.

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NEW PUBLIC WORKS

EXETER.—The engagement of Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., of Bolton, as architects to advise as to the design of Exeter's new City Hall and lay-out of the area adjoining has been recommended to the City Council. The special committee dealing with civic buildings report that they have re-examined the question of the development of the area at the rear of the Guildhall in view of the adoption by the City Council of a proposal that new police headquarters and Law Courts be erected adjacent to the area of the new civic buildings, and that these should be linked with the City Hall scheme for the purpose of the lay-out and the design of buildings. No open competition will be held for the purpose.

GREAT BRITAIN.—Among the contracts advertised by local authorities in this issue as being open to tenders are:—Cirencester R.D.C.—6 houses in Parish of Coates; Watford T.C.—Erection of electricity showrooms and offices in High-street; Beckenham T.C.—Erection of cycle sheds and enclosures to verandah and covered ways, Hawes Down School; Newmarket R.D.C.—32 houses and 8 bungalows in various parishes; Oswestry T.C.—26 houses on Llwyn Farm estate; Bournemouth C.B.—Erection of proposed secondary school for boys at East Way, Bournemouth; City and County of Bristol—86 houses on Knowle West housing site and 50 on Horfield housing site; Durham C.C.—New branch library at Haverton Hill-on-Tees, and alterations at New Silksworth School; Birmingham T.C.—Erection of police school at Digbeth Police Station.

SCAFFOLDING THAT COLLAPSED

A LIVERPOOL ACCIDENT.

METAL brackets used for scaffolding purposes were exhibited at the Liverpool Coroner's Court, when an inquest was held on George Worthington, aged 60, builder's jobber, of St. Domingo-vale, Liverpool.

Worthington died in Stanley Hospital following injuries received when he fell about 20 ft. from a scaffold on which he was working, with an assistant, on September 4, "pointing" the brickwork of a house in Miranda-road, Kirkdale. His fall was due to the scaffold collapsing.

Alfred Woolrich, of Robsart-street, Liverpool, who was working with Worthington, and who also fell when the scaffolding collapsed, described the scaffolding and its method of structure. It consisted of two metal brackets which were affixed to the brickwork by metal "grapplers," the "tongues' of which were driven into the wall, being supported by the bricks above and below them. Planks were then laid across the brackets.

William Evans, estate agent, of Argus-road, Kirkdale, said that Worthington, who was highly competent, had worked for him since 1907. He could not explain how the scaffolding collapsed, as examination showed that the bricks had not "given."

The jury, in returning a verdict of "Accidental death," added that they thought that, although the bracket system was efficient, if the tongue of the "grappler" could be thickened, it would make for additional safety. No blame attached to the employer.

The Coroner (Mr. G. C. Mort) asked Mr. W. J. Carter, H.M. Inspector of Factories, who represented the Home Office, to forward the jury's rider to the manufacturers of the instrument.—*Liverpool Daily Post.*

Restoration at Southwark Cathedral.

The Chapter of Southwark Cathedral have decided upon an extensive plan of restoring the fabric, which has been seriously affected by the weather, and the work is proceeding on the ancient Lady Chapel. The cost is estimated at £10,000.

PRICES CURRENT OF MATERIALS*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside in River Thames up to Mortlake

	£ s. d.
Best Stocks	4 2 0
Second Hand Stocks	3 10 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	*2 6 8	Flettons, B'll'n'se	3 6 6
Flettons at King's Cross	*2 6	Best blue Pressed Staffs	8 5 0
Do., grooved for Plaster	*2 8 3	Do. Bullnose	8 15
White Midhurst Facing Bricks (delivered London site)	4 0 0	Blue Wire Cuts	7 0
"Phorpres" Whites (King's Cross)	3 11 3		
"Phorpres" Rustic Facings (King's Cross)	*3 6 3		

Best Stourbridge Fire Brick :—
2½ in. ..... 7 15 0 3 in. 8 15 0

*Delivered to site in W.C. district, 4/3 extra per 1,000.

GLAZED BRICKS—

Best White Ivory and Salt Glaze Stretcher	23 0 0	Db'le Str'tch'rs	31 10 0
Headers	22 10 0	D'ble Headers	28 10 0
Quoins, Bull-nose and 4½in. Flats	29 10 0	One side and two Ends	32 10 0
		Two sides and one End	33 10 0
		Splays and Squints	30 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½ " "	1 8	4" "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½ " "	3 6	4" "	4 7

HEMPSTEAD—KEYED "TWO" SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

	s. d.	
Thames Ballast	7 3	per yd.
Pit Ballast	6 3	" "
Pit Sand	7 9	" "
Washed Sand	8 3	" "
¾ in. Shingle	7 3	" "
½ in. Broken Brick	11 3	" "
Tan Breeze	8 3	" "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement, Standard Specification, delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable) :—

	£ s. d.
4 ton loads and upwards site ..... Per ton	1 19 0
1 ton to 4 tons site	2 1 0
Alongside Vauxhall in 80-ton lots	1 15 0
"Ferrocrete" Rapid Hardening Cement :—	
4 ton loads and upwards site	2 5 0
1 ton to 4 tons site	2 7 0
Alongside Vauxhall in 80-ton lots	2 1 0

NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett, if returned in good condition within three months, carriage paid.

Water Repellent "Blue Circle" Cement, 30/- per ton extra on ordinary "Blue Circle" Portland Cement prices.

"Colocrete" Nos. 1 and 2 Coloured Rapid Hardening Portland Cement in 1-cwt. paper bags free (non-returnable) in 1-ton lots and upwards site 3 6 0

"Snowcrete" White Portland Cement in 1-cwt. paper bags free (non-returnable) 1 ton and upwards site 8 15 0

Super Cement (Waterproof) paper bags free	3 9 0
Roman Cement	6 15 0
Parian Cement	6 0 0
Keene's Cement, White	6 0 0
" Pink	5 12 6

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	2 17 0	Sirapite, Coarse	3 5 0
White	3 10 0	" Finish	3 13 0
Pioneer	3 13 0		
Super Carbo	2 7 6	4-ton loads & over London Area, paper bags free.	
Carbo Setting	2 12 6		
Best Ground Blue Lias Lime	1 17 6	Grey Stone Lime	2 2 0
		Chalk Lime	2 2 0
Granite Chippings	1 12 0	Hair per cwt.	2 2 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months carr. paid.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station, per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½
Selected approximate size one way, 1d. per cubic ft. extra; selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE— Brown Whitbed, in random blocks of 20ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do., delivered on road waggons at above stations, per ft. cube	4 5½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average*, and ½d. beyond 30ft.	
HOPTON-WOOD STONE— F.O.R. Quarries, Wirksworth, Derbyshire Random blocks from 10ft. and over P.ft.cb.	14 0
Sawn two sides	22 6
Sawn three or four sides	27 9
CHILMARK—RANDOM BLOCK— At Nine Elms, per ft. cube	3 11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station London.

6 in. sawn two sides landings to sizes (under 30 ft. super)	Per ft. super	5 6
6 in. rubbed two sides, ditto	"	6 0
3in. sawn two sides slabs (random sizes)	"	2 3½
2in. to 2½in. sawn one side slabs (random sizes)		1 6½
1½ in. to 2in., ditto		1 3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks	Per ft. cube	6 3
6-in. sawn two sides landings to sizes (under 40 ft. super)	Per ft. super	5 1½
6 in. rubbed two sides, ditto	"	6 1½
4in. sawn two sides slabs (random sizes)	"	3 1½
3in. ditto ditto	"	2 8
2in. self-faced random flags	Per yd. super	7 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6	£18 10
4 × 9	22 10	3 × 11	19 10
4 × 8	21 0	2 × 11	19 10
4 × 7	19 0	3 × 9	19 10
3 × 8	17 10	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1¼	25/-
¾	17/-	1½	31/6
1	19/-		

TONGUED AND GROOVED FLOORING Inches.	per sq.	MATCHING (BEST). Inches.	per sq.
1	21/-	⅝	16/-
1¼	26/-	¾	18/6
1½	32/6	1	22/6

ins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 per 100ft.	2 6	Per bundle	2 3

HARD WOOD.

1 INCH AND UP THICK.

	£ s. d.
Average price for prime quality.	
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 13 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.	4 7 0 to 5 10 0

HUDDERSFIELD Building Society

Experience has shown that the arrangements made by the Huddersfield to assist occupier borrowers have given the utmost satisfaction, and the service rendered has been greatly appreciated by builders' clients.

Write for the Folder "Mortgage Facilities" to The Huddersfield Building Society, Britannia House, 203, Strand, London, W.C.2, or to the Head Office, Britannia Buildings, Huddersfield. Andrew Stewart, C.A., Managing Director.

WHEN YOU INVEST—A HOUSE IS BEST!

SLATES

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	29 15 0	18 by 10	15 12 6
22 by 12	25 0 0	18 by 9	13 15 0
22 by 11	22 10 0	16 by 10	13 10 0
20 by 12	22 0 0	16 by 8	10 7 6
20 by 10	19 7 6		

TILES

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£4 3 6
ditto hand-made ditto	4 10 0
Ornamental ditto	4 15 0
Hip and valley tiles (per dozen) Hand-made	0 8 6
Machine-made	0 3 0

METALS

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	£13 10 0
Plain Compound Girders	16 0 0
" Stanchions	18 0 0
In Roof Work	20 0 0

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter	£ s. d.	Diameter	£ s. d.
½ in.	14 5 0	⅝ in. to ½ in.	12 15 0
⅜ in.	13 5 0	⅝ in. to 2½ in.	12 5 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛in. to 6in. %	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in. %	Standard Fittings Sizes ⅛in. to 6in. %	Standard Flanges Sizes ⅛in. to 6in. %
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas.	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3in.	1/5½	1/1½	4½d.
3½ in.	1/6½	1/3	5½d.
4 in.	1/6½	1/4½	6½d.
4½ in.	1/8	1/6½	9½d.
5in.	1/10½	1/8½	10d.

O.G. GUTTERS.

3 in.	1/7½	1/5½	7d.
3½ in.	1/9½	1/5½	7½d.
4 in.	1/11	1/6½	8½d.
4½ in.	2/0	1/9½	9½d.
5 in.	2/4½	2/0½	11½d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles, stock Branches, stock angles.
2 in.	2/2½	1/4½ 2/0
2½ in.	2/3½	1/6½ 2/4½
3 in.	2/9½	1/11 2/10½
3½ in.	3/3½	2/3½ 3/3½
4 in.	3/9	2/9 4/0½

Less 20 per cent. trade discount.
Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

	Pipe. s. d.	Bends, stock angles, stock Branches, stock angles. s. d.	s. d.
2in. per yd. in 6fts.	2 9½	2 0	2 5½
2½in. "	3 2	2 2½	3 0½
3in. "	3 6	2 5½	3 7½
3½in. "	3 9½	3 0½	4 2½
4in. "	4 2½	3 4½	4 10½

L.C.C. COATED DRAIN PIPES.—London Prices ex Stock.

	Pipe. s. d.	Bends, stock angles, stock Branches' stock angles. s. d.	s. d.
3in. per yd. in 9ft. lengths	3 4½	4 3	7 0
4in. cwt. qr. lbs. 1 1 20	5 1	5 9	8 6
5in. 1 2 22	6 3	8 9	13 9
6in. 2 0 6	7 5	10 3	18 0

Gaskin for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common Bars	10 0 0	to	10 10 0
Staffordshire Crown Bars— Good merchant quality	11 0 0	to	11 10 0
Staffordshire Marked Bars	14 10 0	..	15 10 0
Mild Steel Bars	9 10 0	..	10 10 0
Steel Bars, Ferro-Concrete quality, basis price	9 0 0	..	9 10 0
Hoop iron, basis price	11 10 0	..	12 10 0
" Galvanised	28 0 0	..	29 0 0

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*Contd.*).

Per ton in London.

IRON—	£ s. d.	£ s. d.
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g.	11 10 0 ...	12 0 0
,, ,, 24 g.	12 10 0 ...	13 10 0
,, ,, 26 g.	14 10 0 ...	15 10 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 0 0 ...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g. ...	17 10 0 ...	18 10 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	14 0 0 ...	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g. ...	16 10 0 ...	17 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	17 10 0 ...	19 0 0
Sheets, Galvanised, Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	15 10 0 ...	17 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	16 0 0 ...	18 0 0
Best Soft Steel Sheets, 26 g.	17 10 0 ...	19 10 0
Cut Nails, 3 in. to 6 in.	16 10 0 ...	18 0 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d
Seamless Copper tubes (basic).....	per lb.	0 10
Strong sheet	,,	0 11
Thin	,,	1 0
Copper nails	,,	1 0
Copper wire	,,	1 0

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	200/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GLASS CLEANING SCREW.

	1½ in.	1¾ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/ per doz.

TIN.—English ingots, 2/6 per lb. SOLDER.—Plumbers' 1/1, Tinmen's 1/3, Blowpipe 1/4 per lb.

LEAD, &c.

(Delivered in London.)	£ s. d
LEAD.—Sheet, English, 4 lb. and up	26 5 0
Pipe in coils	25 15 0
Soil pipe	31 10 0
Compo pipe	31 15 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra, and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills .....per ton } £16 5 0

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in pipes	per gallon	0 3 0
,, ,, in barrels	,,	0 3 2
,, ,, in drums.....	,,	0 3 4
Boiled ,, ,, in barrels	,,	0 3 5
,, ,, in drums	,,	0 3 7
Turpentine, in barrels	,,	0 3 9
,, in drums (10 galls.)	,,	0 3 11
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		51 0 0

Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered 70 0 0

		£ s. d.
Read Lead, Dry (packages extra) ...	per ton	37 0 0
Best Linseed Oil Putty	per cwt.	0 13 0
Size. XD quality .....fkn.		0 3 6

VARNISHES, &c.

		Per gallon.
Oak Varnish .....Outside		0 14 0
Fine Do.	Do.	0 16 0
Fine Copal	Do.	0 18 0
Pale Copal	Do.	1 0 0
Pale Opal Carriage	Do.	1 4 0
Best Do.	Do.	1 12 0
Floor Varnish .....Inside		0 18 0
Fine Pale Paper	Do.	0 18 0
Fine Copal Cabinet	Do.	1 2 0
Fine Copal Flatting	Do.	1 0 0
Hard Drying Oak	Do.	0 18 0
Fine Hard Drying Oak	Do.	0 19 6
Fine Copal Varnish	Do.	1 0 6
Pale Do.	Do.	1 12 0
Best Do.	Do.	1 2 6
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

GLASS

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY & SELECTED GLAZING QUALITY.

per ft. super.		per ft. super
15 oz. O.G.Q.....	2½d.	32 oz. O.G.Q..... 6½d.
15 ,, S.G.Q. ...	2½d.	32 ,, S.G.Q. ..... 7½d.
21 ,, O.G.Q.....	3½d.	Obscured Sheet, 15 oz. 3½d.
21 ,, S.G.Q. ...	3½d.	,, ,, 21 ,, 4½d.
26 ,, O.G.Q.....	4½d.	Fluted, 15 oz. 6½d., 21 oz. 9d.
26 ,, S.G.Q. ...	5d.	Em'lld 15 oz. 4½d., 21 oz. 5½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ¼ in.	4½d.
Rough rolled, ⅛ in.	5½d.
Rough rolled, ¼ in.	5½d
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Do. tinted	8d.
Rolled Sheet	5d.
White Rolled Cathedral	5d.
Tinted Do.	7½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	per ft. s. d.
Clearsheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate not exceeding 1 foot	1 6
Do. do. 2 feet	3 0
Cathedral— not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 6
3/16 in. Wired Georgian Design. Sizes up to 96 inches long by up to 24 inches wide	2 6

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. for the Building Industry from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹½
Craftsmen	1/7	1/6½	1/6	1/5½	1/5	1/4
Labourers	1/2½	1/1½	1/1½	1/1	1/0¾	1/0½

Aberdeen .....A	Dundee .....A	Hawick .....A²	Perth .....A
Airdrie .....A	Dunfermline .....A	Helensburgh .....A	Perthshire ..... A²
Alexandria .....A	Dunoon .....A	*Inverness .....B	Peterhead ..... A²
Arbroath.....A	East Lothian ...A	Kilmarnock .....A	Renfrewshire .....A
Ayrshire .....A	Edinburgh .....A	Kincardineshire A	Rothesay .....A
Bathgate.....A	Falkirk .....A	Kinross-shire .....A	Roxburghshire ...A²
Bo'ness .....A	Forfarshire .....A²	Kirkcaldy .....A	St. Andrews .....A
Broughty Ferry...A	Fort William .....B	Lanarkshire .....A	Selkirkshire .....A
ClackmannanshireA	Galashiels .....A²	Leith .....A	Stirling .....A
Coatbridge .....A	Glasgow .....A	Midlothian .....A	Stirlingshire, West A
Dumbartonshire A	Greenock .....A	Motherwell .....A	West Lothian.....A
Dumfries.....A²	Hamilton .....A	Peeblesshire .....A²	Wishaw .....A
Dumfriesshire ...A			

The information given in this table is copyright. *Slaters and Plumbers have special rate of 1/5½; and Labourers 10d. to 1/-. The rates of wages in various towns in England and Wales are given on page 612.

THE SCOTTISH BUILDER

NEW BUILDINGS

ABERDEEN.—HALL.—Mr. Harbourne MacLennan, 16, Bridge-street, Aberdeen, is the architect of the new church hall, to be erected at a cost of £8,000 for the Holburn Central Church, Aberdeen.

BALLOCH.—SWIMMING POOL.—The Vale of Leven District Council have decided to ask Dumbarton C.C. to provide a swimming pool in the Balloch district.

BO'NESS.—ALTERATIONS.—The T.C. are to alter the Burgh Stables, at £1,000. The architect is the Burgh Surveyor.

COATBRIDGE.—HALL.—Messrs. Stewarts and Lloyds, Ltd., are to erect a welfare hall in Tennant-street, at £2,000.

COATBRIDGE.—EXTENSION.—Plans for the erection of an extension to the Scottish Co-operative Wholesale Society, Ltd.'s, creamery at Dunbeth-road, at a cost of £20,000 were passed at a meeting of the Dean of Guild Court.

CLYDEBANK. — FACTORY. — Messrs. J. Brockhouse and Co., Ltd., Victoria Works, Hill Top, West Bromwich, have purchased ground from the T.C. for a new factory. The site is at the east end of Livingstone-street.

CULTER.—ADDITIONS.—A scheme of additions is to be carried through at the Linnmoor Home. The architects are Messrs. George Bennett Mitchell and Son, 1, West Craibstone-street, Bon-Accord-square, Aberdeen.

CUMNOCK.—HOUSING.—The T.C. have approved of the lay-out of their next housing scheme at Car-road, as submitted to them by the Department of Health. The houses will consist of 42 of three apartments, 32 of four apartments, and 12 of five apartments.

CUPAR.—CHURCH.—Mr. R. F. J. Fairlie, of Lindores, Fife, has gifted a church to the R.C. community. A site has been acquired at Kirkgate. Mr. Fairlie will prepare the plans.

DUNDEE.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the office of the City Engineer: Arbroath-road—house for A. Thomson and Co.; architects: Maclaren, Soutar and Salmond, 15, South Tay-street; Morgan-street—additions to cinema for Stobswell Cinema Theatre, Ltd.; Nesbitt-street and Deerpark-road—bungalows for W. Black; architect: W. M. Patrick, 26, Yeaman-shore; School-road—bungalows for the Rockwell Building Co., Ltd.; and Seymour-avenue—bungalows for W. Black; architect: W. M. Patrick.

EDINBURGH.—BUILDING.—Plans for a new hard fibre mill and warehouse—the first portion of a large scheme of rebuilding of the premises of British Ropes, Ltd., recently destroyed by fire at Leith, have been passed at a sitting of the Dean of Guild Court. It is expected that the entire scheme of rebuilding and installing new plant will cost about £250,000. The architect is Mr. James S. Johnston, L.R.I.B.A., Leith. The following warrants were also granted by the Court: James Miller and Partners, Ltd., shop and three houses at corner of Dryden-street and Dryden-gardens; two houses at Milton-drive; house and deviation at Seaview-crescent, Joppa; house and garage at Pentland-grove; Edinburgh and Leith Boy Scout Association, hall at Ford-road, Saughtonhall Mains, and the Scottish Motor Traction Co., Ltd., demolitions and erect garage at East Fountainbridge.

EDINBURGH. — BUILDING. — Tenders amounting to £17,215 for new farm buildings at the Edinburgh Corporation farm at Roddinglaw have been accepted by the General Purposes Committee.

EDINBURGH.—AERODROME.—It was intimated at a meeting of the Lord Provost's Committee of the T.C. that a letter had been

(*Continued on page* 621.)

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	0
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	0
Add if in underpinning in short lengths	,, ,,	5	0
Add if in floors 6 in. thick	,, ,,	2	0
Add if in beams	,, ,,	2	6
Add if aggregate 1 : 2 : 4	,, ,,	8	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,, ,,	1	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	26	0	0
Add if in stocks	,,	6	0	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	5	0
FACINGS.				
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½
POINTING.				
Neat flat struck or weathered joint	,, ,,	0	0	3
ARCHES.				
Extra only to the price of ordinary brickwork:—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	0	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	5	9
SUNDRIES.				
Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	15	6
Chilmark stone fixed complete	,, ,,	13	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	70	0
Do. 20 in. × 10 in. Do. Do.	,,	71	6
Do. 24 in. × 12 in. Do. Do.	,,	73	6

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	3	6
Do. joists	,, ,,	4	0
Do. roofs, floors and partitions	,, ,,	4	6
Do. trusses	,, ,,	6	9

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	30/-	35/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	,,	50	0
Do. to beams	per ft. sup.	0	8
Centre for arches	,,	1	6
Gutter boards and bearers	,,	1	0

FLOORING.		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	38/-	45/-	52/-
Do. tongued and grooved	,,	—	43/-	50/-	58/-
Do. matchings	,,	40/-	45/-	—	—
Moulded skirtings, including backings and grounds	per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	9
Two Do. Do. Do.	,, ,,	2	0
Add for fitting and fixing	,, ,,	0	2
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double-hung, double hung with pulleys, lines and weights, average size		3	3

DOORS.		1½″	1¾″	2″
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	,,	2/4	2/6	2/9
Two-panel moulded both sides	,,	2/6	2/9	2/11
Four-panel Do. Do.	,,	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	,,	1/2	1/4	1/7
Add if cross-tongued	,,	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/-	2/3	2/8	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1½ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	,, ,,	5	6
Add if ramped	,, ,,	11	0
Add if wreathed	,, ,,	22	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	,,	18	0
Do. stanchions	,,	20	9
In roofwork	,,	26	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/-	1/1	1/3	1/6
Ogee Do. do.	,,	1/2	1/3	1/9	2/3
Rain-water pipes with ears	,,	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	,,	1/1	1/4	1/9	2/6
Do. nozzles for inlets	,,	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	35	6
Do. do. flats	,,	34	6
Extra labour and solder in coated cesspools	each	6	0
Welt joint	per ft. run	0	4
Soldered seam	,, ,,	1	6
Copper nailing	,, ,,	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	10½	1/2	1/9	2/5	3/-	—
Do. service	,,	1/3	1/8	2/2	3/2	—	—
Do. soil	,,	—	—	—	—	—	6/-
Bends in lead pipe	each	—	—	—	—	2/3	5/6
Soldered stop ends	,,	0/7	0/11	1/3	2/-	2/6	—
Red lead joints	,,	0/9	0/10	1/1	1/7	1/10	3/6
Wiped soldered joints	,,	2/-	2/6	2/9	3/5	4/3	6/-
Lead traps and cleaning screws	,,	—	—	—	10/-	13/-	—
Bib cocks and joints	,,	6/-	9/-	13/-	—	—	—
Stop cocks and joints	,,	10/6	12/6	17/6	50/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	0
Do. Do. Sirapite	,, ,,	2	3
Do. do. Keen's	,, ,,	3	0
Add saw lathing	,, ,,	1	4
Add metal lathing	,, ,,	2	4
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	,, ,,	1	7
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	4	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	,, ,,	0	7½
Obscured sheet	,, ,,	0	8
⅛-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10
¼-in. wired cast plate	,, ,,	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	7½
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

*These prices apply *to new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

NEW BUILDINGS IN SCOTLAND

(*Continued from page* 619.)

received from the Air Ministry approving of the development of Gilmerton as a local aerodrome.

FALKIRK.—HALL.—The Camelon Trinity Church congregation have received approval from the Dean of Guild Court to erect a hall with offices adjoining the church. The cost of the project is £900.

FIFE.—HOUSING.—The C.C. has decided to erect 84 houses at Rosewell, Lochore, and 68 houses at Crosshill, Lochore. The plans for the schemes have been prepared by Messrs. William Williamson and Hubbard, F./A.R.I.B.A., Royal-buildings, Kirkcaldy.

FORRES.—HOUSES.—The T.C. have agreed to resume occupation of land in North-road for the building of 32 houses.

GALASHIELS.—HOUSING.—The T.C. has decided to borrow £4,000 for the improvement of dwelling-houses in the burgh, and to borrow £3,230 for work in connection with the erection of three blocks of houses at Glebe-place.

GLASGOW.—HOUSES.—The Corporation is to proceed with 60 houses in Dalmarnock-road.

GLASGOW. — BUILDING. — Proposals are being considered by special sub-committee of the Corporation to improve the entire frontage of Argyle-street between Jamaica-street and St. Enoch-square, and a recommendation is now before the Town Council that certain buildings be acquired for £80,000. The premises recommended for purchase are 1-7, Jamaica-street, and 205-207 Argyle-street.— For a new fire station, the Police Committee have considered a sketch plan of the proposed building, which is estimated to cost £70,000.—PROVISION for a gymnasium in the new baths establishment which it is proposed to erect at Glasgow-green is recommended by the Committee on Baths and Washhouses.

GREENOCK.—HOSPITAL.—The T.C. has decided to proceed with the new municipal hospital at Larkfield. The new hospital will have accommodation for 140 patients.

HADDINGTON.—EXTENSIONS.—Plans were passed by the Dean of Guild Court for improvements and extensions of the Bermaline Flour Mill, for Messrs. Montgomerie and Co., Ltd., of Glasgow.

PAISLEY. — SCHOOL. — Plans for a new school, to be erected by the Renfrew C.C. to take the place of the present West School, were passed by the Paisley Dean of Guild Court. The building, which is to be erected in George-street and Newton-street, will comprise 24 ordinary classrooms and a kindergarten section.

PERTH.—HOUSES.—The Dean of Guild Court has passed plans for 120 houses at Florence-place by the Perth Housing Association, Ltd.

PETERHEAD.—RESERVOIR.—The T.C. has decided to purchase ground at Berryhill, near Peterhead for an additional storage reservoir. The estimated cost of the scheme is £22,400.

PITTENWEEM. — IMPROVEMENTS. — At a meeting between Pittenweem fishermen and Pittenweem T.C. a harbour improvement scheme estimated to cost £8,410 was unanimously approved.

RENFREW.—HOUSES.—The Dean of Guild Court has passed plans for 28 houses in Paisley-road, to be built by Messrs. John Lawrence and Co., Glasgow.

RENFREWSHIRE.—HOUSES.—The Department of Health for Scotland has approved of schemes put forward by the C.C. for 406 houses. The schemes comprise 218 houses at Linwood, 110 at Busby, and 78 at Bridge of Weir (Mill o' Gryffe site).

ROTHESAY. — PAVILION. — The Dean of Guild Court has passed plans for a new entertainment pavilion, to be erected in Argyle-street on the West Promenade. The approximate cost is £43,000.

RUTHERGLEN. — HOUSES.—Messrs John Train and Co., Ltd., builders, Glasgow, propose to erect several hundred houses on the Springhall Golf Course, and the T.C. are to build 66 houses.

STRANRAER. — HOUSES. — An additional 100 houses are to be built by the T.C. on the Dick's Hill site. The Council are also contemplating a further housing scheme at Bowling Green-road for the relief of overcrowding.

TRADE NEWS

Steel Plates and Flags.

An independent company, entitled Stelcon (Industrial Floors), Ltd., has just been formed for the sale in Great Britain and overseas of Stelcon Anchor Steel Plates and Stelcon Steel-Clad Flags, which for the past ten years have been handled by Langley London, Ltd., of 161, Borough High-street, London, S.E.1. This development has been rendered desirable owing to the very big increase in Stelcon sales during recent times. The new company comes into being immediately, and its address is: Clifford's Inn, London, E.C.4. (Telephone: Holborn 2916.) Mr. F. A. Langley and Mr. T. Kilburn are directors of the company, and the staff has been recruited from Langley London, Ltd., thus ensuring proper continuity of the business.

A Middlesex Mansion.

In October, by order of the executors of the late Mr. W. H. Fenton, J.P., Messrs. Tyser, Greenwood and Co., of Chiswick and Bedford Park, will offer for sale by auction Heston House, Heston, Middlesex. Plots of valuable building land, a residence at Hounslow, and a number of cottages in Heston Village are also to be sold. Heston House is of considerable local interest, parts of it dating from 1680, with Georgian additions. It is one of the few fine old mansions in Middlesex which has so far escaped demolition and redevelopment. A feature of the residence is its Georgian appointments. In the grounds is an ancient dovecot with 400 nesting boxes.

A Petrol Blow-Lamp.

Condrup, Ltd., have just introduced two new "Primus" petrol blow-lamps which our readers may be interested to know about. They are provided with a heavy-duty pump forming the handle; the burner is fitted with pilot lighter and soldering-iron support; and each pattern is provided with safety valve and automatic cleaning device at the nipple; the fool-proof flame tube is one piece with heavy cast mount. The burner is skewed, and has a 6 in. flame. The lamp will burn upside down or in any position, while it is particularly useful for narrow trench and telephone work. The tanks are of finely polished non-porous brass. Moreover, being of the "Primus" brand, they have behind them a manufacturing experience second to none. The No. 807 (illustrated) is claimed to be the most powerful one-pint "Primus" petrol soldering lamp so far

A PETROL BLOW LAMP.

introduced. Supply is through the usual dealers, but full details may be obtained from 77-78, Fore-street, E.C.2.

BRITISH MADE
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Guaranteed
We invite you
SLIDING DOOR GEAR
to send for our technical representative and our guide and plan book—free.
Competitive in price although the best.
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NEW CLINIC, HULL

The Minister of Health, Sir H. Kingsley Wood, M.P., is to open the new North Hull clinic—one of the largest buildings of its type in the country—on Monday, October 12. The clinic, which cost £10,000, is built on the Beverley Estate, Hull. The maternity and child welfare section can cope with 100 patients per three-hour session, and the school section a similar number. The building took over 12 months to erect. The clinic occupies an area of 4,503 sq. yds. Two roadways have been specially built in order to provide entrances from either of the two avenues which form the boundaries of the clinic. They lead into the forecourt, which contains a pram shelter. The various rooms are grouped around the waiting-room and quadrangle. The design is modern, the elevations being of sand-faced bricks and cream stucco. The roof is flat, with the exception of the large waiting-room, which is roofed with glazed speckled green pantiles.

Internally, the clinic is finished in materials which ensure both beauty and utility. Flush doors have been fitted throughout and external doors are faced with aluminium. The floors of the school clinic entrance hall and corridor are finished with rubber tiles; conveniences, boys' and girls' sprays and entrances with terrazzo; and the remaining rooms with Jarrah wood blocks. Window sills, conveniences and boys' and girls' spray baths are tiled with vitrolite, and all lavatory basins, sinks and foot-baths are similarly treated. Heating is provided by electric rayrads and tubular heaters. The clinic was designed by the City Architect, Mr. D. Harvey, A.R.I.B.A., and erected by the City Engineer, Mr. H. Hamer, M.I.C.E., F.S.I. Dr. N. Gebbie, M.D., D.P.M., D.P.H., is the Hull Medical Officer of Health.

BUILDING PROGRESS.

Employment during August, states the current issue of the *Ministry of Labour Gazette*, showed a slight improvement among all classes of workers except bricklayers and plasterers, and was good on the whole. In all divisions, and with all occupations except bricklayers, it was better than a year ago. As regards individual occupations, employment was fair with slaters and painters and good with other classes of skilled operatives; a shortage of skilled men, particularly bricklayers and plasterers, was reported from some areas. Among labourers, etc., employment remained slack. The percentage of unemployment at August 24 was 11.8, being 0.2 and 2.2 per cent. lower respectively than for the month before and August, 1935.

Returns as to the estimated cost of buildings for which plans were approved during August have been received from 144 local authorities (representing towns with a total population of 17,603,000 in 1931). These returns show that in August, 1936, plans were passed for buildings with an estimated cost of £7,508,900, as compared with £7,208,900 in August, 1935.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government Departments.*

Andover.—Works, for the R.D.C.:—

Demolition of 1, Mullins-pond, Amport—
*C. G. Bennett £50
Eight cottages and the forming of a new road at Longparish—
*F. Sainsbury & Sons £3,289 16

Arbroath.—Library extensions, for the T.C.:—

Mason—*C. Dick & Son, Monifieth.
Joiner—*J. Robertson & Son.
Plasterer—*A. Donald & Son.
Plumber—*Wm. Cook.
Electric light—*J. E. Crane, Dundee.
Glazier—*D. J. Scott.
Painter—*R. M. Meekison & Sons.
(Remainder of Arbroath.)

Birmingham.—Ten shops and flats on the Coventry-road at Sheldon, for Messrs. Blakemore & Winterton, of 43, Cannon-street, Birmingham:—

*Enterprize Buildings, Ltd., Birmingham.

Bolsover.—Public convenience in Church-street, for the U.D.C. Mr. S. Hoten, surveyor:—

*Direct Labour £460

Cannock.—Twelve houses in Broad-lane, Essington, for the R.D.C.:—

*H. Gorman, Churchbridge £3,500
(In lieu of previous tender.)

Chester.—Works, for the T.C.:—

External painting of two public elementary schools and one centre—
*Taylor & Son, Queen-street, Chester £125 19
Construction of the new gate at The Newgate and the repair of the City Walls—
*H. A. Clegg & Sons, Chester £6,625
Works required at the City Hospital and Public Assistance Institution:—
Painting and decorating in blocks 1 and 3—
*Taylor & Co., Chester £98 14
Plastering the walls in parts of block 2—
*William Vernon & Sons, Ltd., Chester £170 5 5
Reflooring—
*Thompson, Bayliss & Co., Ltd., Rainham £193 8 1
Reslating the Town Hall Tower and repairing the front gable—
*W. T. Furse & Co., Nottingham £129

Chester-le-Street.—516 houses, for the R.D.C. Mr. M. Wilson, architect:—

*Direct Labour.

Coseley.—Installation of electricity in 70 Council houses at Princes End, for the U.D.C.:—

*F. B. Chaplin, Bilston £315

Coseley.—Maternity and child welfare centre and minor ailments clinic in Bayer-street, for the U.D.C. Messrs. Scott & Clark, architects, Regent-chambers, Wednesbury:—

*Sabin & Young, Ltd., Walsall ... £3,823 17 2

Coventry.—Demolition of the Hippodrome in Hale-street, for the Coventry Hippodrome Co., Ltd. Messrs. Hattrell & Wortley, L.R.I.B.A., architects, 1, Queen's-road:—

*F. Smyth & Co., 39, Woodside-avenue, Coventry.

Coventry.—Additions to the Hens-lane schools, for the T.C.:—

*Kelley & Sons, Coventry £7,416

Cowes.—Construction of a breakwater, for the Cowes Harbour Commissioners:—

*Holborn Construction Co., Ltd. £10,415 3 7

Cuckfield.—Eight houses at Horstead Keynes, for the R.D.C.:—

*Knight Bros., Portslade £2,979 3 7

Darlaston.—Erection of "Nelson Hotel," Catherines Cross, for Messrs. W. Butler & Co., Ltd., brewers, Springfield Brewery, Wolverhampton. Messrs. Scott & Clarke, F.R.I.B.A., architects, Regent-chambers, Wednesbury:—

*Molyneux Bros., Walsall.

Darlington.—Shop premises at Skinnergate, for Messrs. E. Upton & Sons:—

*W. S. Hutton, Ltd., Post House Wynd, Darlington.

Darlington.—New hall in Cobden-street:—

*H. Parvin & Sons, 17, Horsemarket, Darlington.

Darton.—Methodist chapel and Sunday-school, for the Trustees of Mexborough Methodist Church. Mr. C. F. Moxon, architect, Regent-street South, Barnsley:—

*Glew Bros., Royston, near Barnsley.

Droylsden.—New hotel on the Clockhouse estate, for Messrs. Wilson's Brewery, Ltd., Monsall-road, Newton Heath, Manchester. Messrs. W. Johnson & Sons, architects, 27, Oldham-road, Miles Platting, Manchester:—

*P. Hodkinson, Ltd., Manchester.

Dudley.—14 shops:—

‡Jakeman & Round, Hellier-street, Dudley £13,677

Dudley.—Roads and sewers on the Roseland estate, for the T.C.:—

‡Tarmac, Ltd., Ettingshall £20,475

Dudley.—200 houses on the Wren's Nest estate, for the T.C.:—

‡Eadie & Co., 29, Waterloo-road, Wolverhampton £73,851

Exeter.—Rebuilding of "Ye Olde Chevalier Inn" public-house, 78-79, Fore-street. Mr. John Bennett, F.R.I.B.A., architect, Southernhay West. Mr. W. T. Hills, F.S.I., quantity surveyor, 36, Torwood-street, Torquay:—

*Stephens & Son, Ltd., 9, Bedford-circus, Exeter.

Flint.—Two covered reinforced concrete service reservoirs, also construction of cast-iron water mains, comprising about 4,300 yds. 7-in. dia., 1,175 yds. 6-in. dia., 1,440 yds. 5-in. dia., 1,750 yds. 4-in. dia., 5,700 yds. 3-in. dia., with all fittings, for the T.C. Messrs. Williams & Clarke, engineers, 6, Godstall-chambers, Chester:—

*Whitley Bros., Salisbury Park, Wrexham £11,489 8 9

Gateshead.—Warehouse at Hawks-yard, for Messrs. Pemberton, Ltd.:—

*Bewley & Scott, Dunston-on-Tyne.

Gravesend.—Extensions to the County School for Boys, for the E.C. Mr. W. H. Robinson, F.R.I.B.A., architect, Springfield, Maidstone:—

*G. E. Wallis & Sons, Ltd., Broadmead-works, Maidstone.

Hazelrigg.—Social club and institute. Messrs. W. Dixon & Son, architects, 1, Collingwood-street, Newcastle-on-Tyne:—

*R. Carse & Sons, High-street, Amble £2,000 (cost)

Hebden Bridge.—Sub-station in Victoria-road, for the U.D.C. Mr. H. H. Sutcliffe, electrical engineer, Electricity Works, Valley-road:—

R. Greenwood & Sons £127 13 6
*L. Mortimer 107 6 9

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SECURE CONTRACTS WITH

THE STEEL SCAFFOLDING CO., LTD.

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Hereford.—Alterations and additions to the "Ships Inn," Ross-road, for the Hereford & Tredegar Brewery, Ltd. Mr. H. E. Bettington, architect, 12, Castle-street:—

Howard & Son £3,723
Peake & Son 3,678
E. Beaven 3,612
H. Lidster 3,580
C. Jewell & Son 3,536
Bayley Bros. 3,478
J. Hiles & Son 2,968
*S. W. Preece & Son, Ross-road 2,863
(All of Hereford.)

Horsforth.—New hotel to be styled "The Woodside Tavern" at the junction of Woodside and the New Ring-road, for the Leeds and Wakefield Breweries, Ltd. Messrs. Pennington, Hustler & Taylor, architects, Ropergate, Pontefract:—

*Matthews & Son.

Huddersfield.—Four staff cottages at Mill Hill Isolation Hospital, for the T.C. Quantities by Borough Engineer and Surveyor:—

*J. T. & H. Bottomley, Holly Bank-road, Lindley, Huddersfield.

Huddersfield.—Extensions to the Mill Hill Isolation Hospital, Dalton, for the T.C. Borough Engineer and Surveyor:—

Excavator—*J. T. & H. Bottomley, Huddersfield.
Structural steelwork—*Thos. Walmsley & Son, Bolton.
Reinforced concrete—*J. Cooke & Sons, Ltd., Huddersfield.
Asphalter—*J. Cooke & Sons, Ltd., Huddersfield.
Carpenter and joiner—*Wrigley & Beaumont, Linthwaite.
Plasterer and tiler—*W. E. Jowitt, Huddersfield.
Plumber and glazier—*H. Hilton (Nottingham), Ltd., Nottingham.
Slater—*H. Nelson, Ltd., Bradford.
Painter and decorator—*A. Preston, Huddersfield.

Kettering.—For (*a*) public conveniences in Ebenezer-place; (*b*) eight houses in Avondale-road for aged people; (*c*) garage for the Electricity Department in Northall-street; and (*d*) store, lavatory block and bedrooms at the public library, for the U.D.C. Major J. P. Haugh, F.S.I., M.I.M. & Cy.E., surveyor:—

*Works Department—
(*a*) £1,650
(*b*) 2,150
(*c*) 1,180
(*d*) Thomas Bennett, Kettering 1,376
O. P. Drever & Sons, Ltd., Kettering 1,146
*Works Department, Kettering U.D.C. 1,083

Kidderminster.—Extension to factory in New-road, for the Carpet Manufacturing Co. Messrs. Pritchard, Godwin & Clist, architects, Bank-buildings:—

*T. Vale & Sons, Ltd., Stourport-on-Severn.

Knott End.—Sea wall for provision of broad promenade walk, and widening and improvement of the Esplanade, for the Lancashire C.C. Mr. Peter Schofield, County Surveyor, Preston:—

*Direct Labour.

Liverpool.—Alterations to four stone pylons flanking two entrances to tunnel, and provision of glazed screens, etc., to form traffic inspectors' offices within pylons at Mersey Tunnel, for the Joint Committee. Mr. Herbert J. Rowse, F.R.I.B.A., architect, Martins Bank-buildings, Water-street, Liverpool. Quantities by Messrs. W. M. Law & Son:—

W. Moss & Sons, Ltd., Liverpool £2,702
Joshua Henshaw & Sons, Liverpool ... 2,665
*William Thornton & Sons, Ltd., 38, Wellington-road, Liverpool, 8 2,603

London.—Internal repairs and redecorations in 134 houses on the Grove Park housing estate, for the Lewisham B.C.:—

Walker, Clinging & Co. £4,384 13 4
A. T. Peyton 4,353 15 6
J. Dennett & Co. 3,685 17 0
Andrew Black & Son 3,320 13 0
W. Banks 3,203 0 0
R. A. Blake & Son 2,977 15 0
H. Piper and Son 2,506 11 4
*A. E. Hayes, Ltd. 2,199 13 0

¶London.—List of new contracts placed by H.M. Air Ministry for the week ended September 19:—

Bassingbourne—Supply and erection of hangars—Furness Shipbuilding Co., Ltd., Middlesbrough.

Hemswell and Leconfield—underground and overhead distribution and internal wiring of hutments—Newman & Watson, Stockton-on-Tees.

Bircham Newton—erection and completion of W.T. station and external services to same—T. Fisher & Sons, Fakenham.

¶London.—The following works contracts have been placed by the War Office during the week ended September 17:—

Chilwell, vehicle reserve depot—lining of roofs, etc.—J. H. Brough & Co. (Builders), Ltd., Beeston.

Aldershot, Stanhope Lines—renew floors and plaster walls at various barracks—J. Chester, Farnham.

¶**London.**—H.M.O.W. have placed the following contracts for the week ended September 17 :—

Regent's Park—resurfacing of outer circle road—Highways Construction, Ltd., Iddesleigh House, Caxton-street, Westminster, S.W.1.

Draught screens—G. M. Hammer & Co., Ltd., Crown-works, Hermitage-road, N.4.

Victoria Telephone Exchange—extension—Galbraith Bros., Ltd., 71, Waterloo-street, Camberwell, S.E.5.

Tables, solid top—F. Troy & Co., Ltd., 194, Finchley-road, N.W.3.

Steel book shelving, British Museum — Roneo, Ltd., 17, Southampton-row, W.C.1.

Machine and camera gun cupboards—supply and delivery—North of England School Furnishing Co., Ltd., Kinross-street, Darlington.

Eastgate (Leeds) Employment Exchange—heating and hot-water services—Johnson, Burton & Theobald, Ltd., 4, Castle-street, Norwich.

Faringdon (Berks) Telephone Exchange and garage —erection — Francis Bros., 11, Armour-road, Tilehurst, Reading.

Wirework—baskets, panels, etc.—J. Starkie & Sons, Church-street, Preston.

Bunting—red, white and blue—The United Turkey Red Co., Ltd., 10, Carlotte-street, Manchester.

Bradford T.E.—demolition—Harrison & Co., Post Hill Quarries, Farnley, Leeds.

Albert Dock Telephone Exchange—heating and hot-water services—The Brightside Foundry and Engineering Co., Ltd., 39, Victoria-street, S.W.1.

Government Respirator Factory, Garden-street Mill, Blackburn—hot-water services—G. Dawson & Sons, 317, Chapel-street, Salford.

Natural History Museum—construction of two mezzanine floors—Higgs & Hill, Ltd., 14, Godliman-street, St. Paul's-churchyard, E.C.4.

Louth.—Bull pens at the Cattle Market, for the T.C. Mr. G. H. Allison, Borough Surveyor :—

*Cartwright & Pickering, Mercer-row, Louth £79 15 0

Lowestoft.—Houses on the St. Peter's-street housing estate, for the C.B. :—

One block of three houses—			
J. Gaze & Sons, Lowestoft	£990	0	0
E. D. Clarke, Lowestoft	945	0	0
*R. H. Carter & Son, Gt. Yarmouth	928	2	6
Geo. A. Gaze, Lowestoft	918	0	0
A. J. B. Smith, Corton	911	13	0
One block of two houses—			
J. Gaze & Sons, Lowestoft	£690	0	0
E. D. Clarke, Lowestoft	630	0	0
A. J. B. Smith, Corton	627	12	0
Geo. A. Gaze, Lowestoft	620	0	0
*R. H. Carter & Son, Gt. Yarmouth	618	15	0
Two blocks of two houses—			
J. Gaze & Sons, Lowestoft	£1,380	0	0
Geo. A. Gaze, Lowestoft	1,264	0	0
E. D. Clarke, Lowestoft	1,245	0	0
A. J. B. Smith, Corton	1,239	0	0
*R. H. Carter & Son, Gt. Yarmouth	1,232	15	0

Luton.—Further extensions to the factories of Vauxhall Motors, Ltd. Messrs. E. Howard & Partners, architects, 3, St. James's-street, S.W.1 :—

*J. Jarvis & Sons, Ltd., 8, Wormwood-street, London, E.C.2.

Luton.—Erection of school clinic in Dallow-road, for the E.C. Borough Engineer and Surveyor, 12, Upper George-street :—

E. & B. Decorating Co., Ealing	£7,083	8	6
Crook Bros., Ware	6,951	0	0
A. Winter & Son, Harpenden	6,515	0	0
A. & E. Fensom	6,414	0	0
Joseph Cartwright, Ltd., London	6,396	0	0
J. T. Garrett	6,143	14	9
Gardner Development Co., Ltd., Dunstable	6,110	8	4
John Saunders & Sons	6,076	0	0
H. C. Janes, Ltd.	6,014	19	7
Seaward Bros.	5,998	0	0
T. Day & Son	5,925	0	0
C. H. Gibson & Sons, High Wycombe	5,825	0	0
C. T. Webb & Son	5,749	0	0
H. Lacey & Son	5,740	0	0
J. A. Perris, Acton	5,650	16	1
*Harvey & Co., Kirkdale-road, Harpenden	5,462	0	0

(Remainder of Luton.)

Manchester.—Furnishing showrooms in Brewery-street and Gaskell-street, Ardwick, for the Manchester and Salford Equitable Co-operative Society, Ltd., Downing-street. Architects' Department, Manchester & Salford Equitable Co-operative Society, Ltd., Downing-street :—

*Building Department, Manchester & Salford Co-operative Society, Ltd., Manchester.

Manchester.—Junior school to accommodate 480 children, in the parish of SS. John and Thomas, Wythenshawe, for the Catholic Authorities. Messrs. Hill, Sandy & Norris, architects, 9, Albert-square :—

Builders—*Tinker & Young, Ltd.
Brickwork—*B. Smith.
Mason—*F. M. & H. Nuttall, Ltd., Whitefield.
Slaters—*Exors. of J. Toft, Patricroft, Eccles.
Plumbers—*A. Longworth & Sons.

(Remainder of Manchester.)
(Estimated cost, £10,000.)

Manchester.—Bridge at Hendham Vale, Harpurhey, for Messrs. Small & Parkes, Ltd., Hendham Vale-works, Collyhurst. Messrs. H. S. Fairhurst & Son, F. & A.R.I.B.A., architects, 55, Brown-street :—

*Russell Building & Contracting Co., Ltd., Manchester.

Manchester.—Additions to the buildings, including orthopædic block, massage and electrical departments, for the Board of Management of the Manchester Royal Infirmary, Oxford-road. Messrs. Thomas Worthington & Sons, FF.R.I.B.A., architects, 178, Oxford-road :—

Builders — *H. Matthews & Sons (Builders), Ltd., Manchester.
Reinforced concrete work—*J. L. Kier & Co., Ltd., London.

(Estimated cost, £15,000.)

Manchester.—Reconstruction of the "Railway Hotel," West Gorton, for the Openshaw Brewery Co., Ltd., Brook-street, West Gorton. Messrs. Ogden & Co., architects, 1, Ridgefield :—

*E. B. Jones & Rawlinson, Ltd., Salford.

Morecambe.—Extensions to the Queen Victoria Hospital, for the Board of Management. Mr. R. Dobson, architect, 37, Euston-road :—

*A. Robinson & Sons, Morecambe.

(Estimated cost, £8,000.)

New Forest.—Four semi-detached houses in Woodlands-road, Netley Marsh, for the R.D.C. Mr. A. F. Read, Housing Surveyor :—

*Turner & Stevens, Lyndhurst £1,367

Newcastle-upon-Tyne.—335 houses on the Pottery Bank housing estate, for the T.C. City Architect, 18, Cloth Market :—

A. V. Clery & Sons, Sunderland	£118,550	0	0
Kirk & Dickinson, Newcastle ...	107,941	15	10
*Gustavus Bailey, Ltd., 16, King-street, South Shields	105,330	0	5
Wm. D. Allison, Whitburn	101,391	0	0

Newcastle-upon-Tyne.—Alterations and additions to the centralised heating and hot-water supply plant, additional heating and hot-water supply, and steam and condense mains, to serve new infants', etc., blocks in course of erection at the General Hospital, for the T.C. City Architect, 18, Cloth Market :—

Selborne Domestic Engineering Co., Ltd.	£3,200
Walter Dix & Co.	3,150
G. N. Haden & Sons, Ltd.	3,057
Steel & Co., Ltd., Sunderland	3,050
Brightside Foundry & Engineering Co., Ltd.	2,858
C. H. Coffee, Low Fell, Gateshead	2,795
*Rowells (1924), Ltd., Byron-street	2,739

(Remainder of Newcastle.)

Northfleet.—Omnibus depot and garage, for the L.P.T.B., 55, Broadway, S.W.1. Mr. S. A. Heaps, L.R.I.B.A., chief architect :—

*Richard Costain, Ltd., Costain House, Upper Woburn-place, N.W.1.

Northumberland.—Widening of Stakeford Bridge, for the C.C. Mr. A. Cheyne, County Surveyor, Newcastle-on-Tyne :—

*Brims & Co., City-road, Newcastle ... £2,998

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Norwich.—Works at the Castle Museum, for the T.C. :—

Redecoration of the art galleries—
*R. G. Carter, Ltd., Drayton £165

Extension of the Students' Room—
*City Engineer's Works Department 650

Pendlebury.—Isolation block to replace existing wooden structure, for the Board of Management of the Royal Manchester Children's Hospital. Messrs. J. W. Beaumont & Son, F.R.I.B.A., architects, 24, Brazennose-street, Manchester :—

*C. Musker Bros., Manchester.

(Estimated cost: £4,000.)

Peterborough.—New Rechabite Hall :—

*John Thompson & Son, Ltd. £2,560

Rochdale.—Erection of "A" block and alterations and additions to existing buildings at Birch Hill Institution, for the T.C. Mr. S. H. Morgan, M.I.C.E., Borough Surveyor :—

Builders—
*Lear & Heywood, Ltd. £21,822
Steelwork—*J. Webb & Sons, Bury.
Slaters—*J. Whitworth.
Electricians—*Rochdale Electric Co.
Plasterers—*F. S. Ross, Ltd.
Painting—*A. & J. W. Lord.

(Remainder of Rochdale.)

St. Just.—Twelve houses at Boswednan, for the U.D.C. :—

Four houses—	
W. H. Marks & Son	£2,250
J. Marks	1,860
Twelve houses—	
H. Rogers	6,798
Hooper Bros.	5,650
E. Dennis & Son	5,312
*Goldsworthy & Ireland	4,644

Salford.—Extensions to the De La Salle College, Pendleton, for the Society of the Salesian Fathers Mr. W. Ellis, architect, 49, Deansgate :—

General contractors—*Tinker & Young, Ltd.
Excavating and bricklaying—*T. Campion & Son.
Slating—*Exors. of J. Toft, Salford, Eccles.
Plumbing—*G. Billington, Ltd.
Painting—*Chas. Bell & Co.

(Remainder of Manchester.)

Saltash.—Redecorating the Guildhall, for the T.C. :—

*Oswald F. Alford £138

Scarborough.—Erection of coach body works in Seamer-road. Messrs. Jones & Rickaby, architects, 102, Westborough :—

*F. W. Plaxton, Ltd., Scarborough.

(Estimated cost: £8,000.)

Scarborough.—Erection of the new St. Thomas' Hotel in St. Thomas-street, for the Scarborough & Whitby Breweries, Ltd., Westborough. Mr. F. Baker, L.R.I.B.A., architect, 7, York-place :—

*F. W. Plaxton, Ltd., Scarborough.

¶**Sheerness.**—Reinforced concrete floors, tiles and foundations, for H.M. Civil Engineer-in-Chief's Department, Admiralty :—

D. G. Somerville & Co., Ltd., 120-122, Victoria-street, S.W.1.

Shrewsbury.—128 houses at Wingfield Close, for the T.C. Mr. A. W. Ward, M.I.C.E., Borough Surveyor :—

*E. Johnson, Ltd., Stoke-on-Trent £41,848

Shrewsbury.—Erection of hotel at the junction of Whitchurch and Haughmand-roads, for Messrs. Worthington & Co., Ltd., brewers, High-street, Burton-on-Trent. Messrs. Fowler, Sandford & Potter, A.R.I.B.A., architects, 8, St. James-street, Sheffield, 1 :—

*A. H. Woodhouse, Shrewsbury.

Skipton.—Improvements, etc., at Roman Terrace Council school, for the West Riding E.C. Mr. H. Wormald, A.R.I.B.A., Education Architect, Wakefield :—

*Brown, Watford & Brown, Hollowgate-road, Wath £520

Southampton.—360 houses and 12 shops on the Coxford housing site, for the C.B. Mr. S. G. Stanton, Borough Engineer. Quantities by the Borough Engineer :—

*W. H. Bryant, Gardeners-lane, Romsey £115,456 3

Southampton.—Demolition of existing building and erection of a shop and offices at 202, Above Bar-street, for the C.B. Mr. S. G. Stanton, Borough Engineer :—

*J. J. Udalls Building Co., Ltd., Carlton-place, Southampton £1,988

Southampton.—Dormitory administrative block and other work at Summer School, Stubbington-lane, Lee-on-the-Solent, for the C.B. Mr. S. G. Stanton, Borough Engineer :—

*W. J. Young & Sons, Lee-on-Solent £1,776 19 10

Stamford.—Waiting-room at car park, Castle-hill, for the T.C. Borough Engineer:—

Ireson & Sons, Stamford	£1,336	0	0
J. W. Barber & Sons, Peterborough	1,294	0	0
*W. Brick & Sons, Stamford	1,267	4	2

Sunderland.—Extensions and alterations to the Queen's Head Hotel. Messrs. W. & T. R. Milburn, architects, 17, Fawcett-street:—
*R. H. Snowdon, Back Belford-road, Sunderland.

Sunderland.—Pavilion with six dressing-rooms at the Pots Playing Fields, for the T.C.:—
*Direct Labour.

Thornton Cleveleys.—Construction of sea wall at Cleveleys, extensions of promenade and erection of a storage tank, for the U.D.C. Mr. H. Fenton, surveyor:—
‡Direct Labour.

Tynemouth.—152 houses on the Ridges estate, for the T.C. Mr. D. M. O'Herlihy, Borough Engineer, 19, Howard-street, North Shields:—
*S. Pye, 115, Verne-road, North Shields £39,696

Wallingford.—32 houses and the construction of a road and sewer on the Cooper's Piece site, for the T.C.:—
*Boshers (Cholsey), Ltd. £13,547 7 4

Warrington.—Works, for the T.C.:—
Reconstruction of two greenhouses in Bank Park—*Osborne & Co. (Warrington), Ltd.
External painting of the Town Hall, etc.—
*William Winstanley & Co.
*T. Allen & Sons.
(*a*) internal painting at Aikin-street Hospital;
(*b*) external and internal painting at Hefferston Grange Sanatorium, Weaverham, Cheshire;
(*c*) external and internal painting at Sankey Smallpox Hospital—
(*a*) *W. Winstanley & Co.
(*b*) *R. Sayers.
(*c*) *T. Allen & Sons.
(All of Warrington.)

Warrington.—Pavilion in Bewsey-park, for the T.C. Mr. J. Y. Hughes, A.M.I.C.E., Borough Engineer and Surveyor:—
*Brew Bros., Cadishead.

Wimbledon.—Underground sub-station in Woodside, for the T.C.:—
*Alexander Thomson (London), Ltd. ... £686

Winchester.—Pair of cottages at Otterbourne, for the R.D.C. Mr. W. R. Cowell, surveyor, "Rye-lands," Hedge End, Southampton:—

Loader & Sons, Kingsworthy, Winchester	£691	0	
W. Houghton, Kane-street, Hedge End	687	0	
*L. T. Crosswell, Moor Green, West End, Southampton	647	10	

Wisbech.—Houses at Wales Bank, Elm, for the R.D.C.:—
*P. White £705

Wombwell.—28 additional houses on the Summerlane site, for the U.D.C. Mr. W. Quest, M.I.M. and Cy.E., surveyor:—
*G. W. Meanley & Sons, Ltd., Doncaster £8,222

York.—Sub-station at Meadowfields estate, Huntington-road, for the T.C.:—
*T. Belt £286 10

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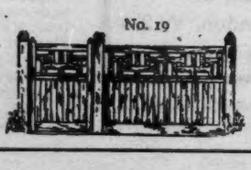
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